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Patterns of functioning in families of preschool children with disabilities.

by

Ann Foster ©

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

Department of Educational Psychology

Edmonton, Alberta
Spring 1995

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ABSTRACT

A modified version of the T-Double ABCX Model (McCubbin & Thompson, 1987) was utilized to describe functioning in 44 urban families of pre-school children with disabilities.

Correlations indicated positive associations between family resources and fathers' age, fathers' occupational status, parents' educational level, gross family income, and years married/living together. Mothers' age, mothers' educational level, and gross family income were positively linked to being proactive in difficult situations. Mothers' educational level was also positively related to situational optimism.

Norm-referenced comparative analyses indicated significantly more stress in the parent-child system for the urban parents, who also reported fewer family resources and less dispositional optimism than the normative group. Family adaptation was, however, rated within normal limits by the majority of the urban parents.

Mother and father comparisons indicated similar levels of stress relative to the child. Fathers perceived significantly more support from co-workers. Mothers' perceptions of support from professionals approached significance. There was no significant difference between mothers' and fathers' perceptions of adaptation, which was within normal limits.

Single-mother and married-mother comparisons indicated child adaptability was more stressful for the single mothers. Single mothers reported fewer resources

relative to financial well-being and extended family support, as well as less support relative to spouse, co-workers, and church/synagogue. Yet both groups of mothers perceived adaptation as within normal limits.

Comparisons with Redington's (1992) rural data indicated significantly less stress relative to the child for the rural parents, who also reported significantly higher levels of support relative to spouse, children, relatives, friends, community groups and co-workers, as well as more coping skills. Yet despite differences in perceived stress and buffering variables, both groups of parents perceived adaptation as within normal limits.

Stepwise regression analyses revealed family resources to be the most influential variable relative to adaptation. Situational appraisals were influential to a lesser degree.

The model was considered an appropriate framework for understanding families raising preschool children with disabilities. Suggestions were given regarding service provision and test construction.

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Finally, gratitude is due to the 66 parents who allowed me to enter into their lives for a short period of time and shared with me private, personal information for the purposes of this study. Many agreed to participate in the hope that ultimately families raising children with disabilities would benefit from the findings. My wish is that through improved early intervention such hopes might materialize.

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CHAPTER I

OVERVIEW

Introduction

The experience of stress is a common human condition and low levels over relatively short periods of time may be perfectly adaptive. High levels of stress, however, chronically sustained, may exert a negative effect on healthy functioning. In the past, most research on stress and health focused on the variety and quality of individual reactions to stressors. It has become apparent, however, that stress is seldom, if ever, related to an isolated event affecting only one person in one situation. It can involve the whole family in both destructive and constructive ways.

Rice (1992) says that family stress is qualitatively different from personal stress. Where individuals experience emotional stress, families suffer loss of harmony. Where individuals suffer from lack of concentration and loss of fluid thinking, families have reduced resources for collective problem solving. Where individuals suffer from high blood pressure or migraine, families break up in separation or divorce. Basically, for individuals, excessive stress influences a bio-psychological system. For families, excessive stress influences a social system. Thus, the importance of the study of family stress and the variables that ameliorate or eliminate it in terms of intensity and chronicity cannot be overemphasised. Such investigation is of particular concern in families raising children with disabilities.

No one is prepared to be the parent of a child with disabilities, an occurrence that inevitably exerts an impact on family members. The loss of the expected and hoped for perfect child, and the associated chronic sorrow and grief, might exacerbate levels of distress in the family. Furthermore, childhood disability makes demands on families in terms of time, social stigma, psychological well-being, family relationships, economic resources, and freedom of movement (Seligman & Darling, 1989). Increased demands can lead to increased feelings of stress in the family.

Moreover, in terms of the well-being of the child, children's cognitive, social, and emotional development can be affected by stress in the family. For example, high levels of stress can leave infants with elevated blood levels of cortisone, a chemical that can inhibit brain development (Chisholm & Webb, 1994). On the other hand, a harmonious relationship between parents, and absence of overt family conflict, as well as a positive relationship with the environment outside of the family, can influence the development of children's social and cognitive competencies during the preschool stage (Rogers, 1991; Silber, 1989). Thus the importance of continuing research into family stress and the factors that serve to reduce it cannot be overemphasized, for the ultimate purpose of optimizing the child's earliest environment.

Despite dire predictions based on the known risks associated with chronic high levels of stress in the family, however, it has become apparent that the possible increased stress inherent in raising a child with a disability does not necessarily lead to dysfunction in families. McCubbin and McCubbin (1993) have pointed out that

no two families respond in the same way, for example, when faced with the same illness stressor. Dramatically different responses can be observed. One family may rally its members and mobilize itself to deal constructively with the demands it faces, whereas another family may be immobilized by the situation and begin to unravel as increased demands are placed upon it. McCubbin and McCubbin (1993) question how such differences in coping can be understood and predicted by health professionals. Fortunately, many investigators have become increasingly interested in understanding the factors that contribute to variability in family experiences (Beckman, 1991). One approach to explain the lack of a strong relationship between life events stress and dysfunction has been the postulation of intervening variables.

Intervening variables have been conceptualized as situational and personal characteristics that assist individuals and families in dealing capably with perceived stress in their lives. The term generally applied to these phenomena is "stress buffer" (Wheeler & Frank, 1988). Essentially, it is felt that if researchers and practitioners have a better understanding of the buffering variables affecting stress in a family, they may be in a better position to help families cope on a long term basis with a child with special needs (McDonald, Kysela, & Reddon, 1988). It certainly behooves professionals who work with families of children with disabilities to understand the social world of families in general and the special needs imposed by the disability (Seligman & Darling, 1989).

The expansion of early childhood special education to incorporate family studies and the assessment of families is a relatively new phenomenon. Reasons for

assessing families include understanding the child in the family context, identifying family strengths, identifying needs for services, and evaluating services (Whitehead, Deiner & Toccafondi, 1990). There are a variety of approaches to family studies, each emphasizing different dimensions of family functioning and dynamics (Gartner, Kerzner, & Turnbull, 1991).

McCubbin and Thompson (1987) have provided an ecological model, namely the T-Double ABCX Model of Family Adjustment and Adaptation, which reflects the multiplicity of factors that contribute to adaptive functioning in the context of the family's developmental life cycle and the social environment. The adaptation phase of the T-Double ABCX Model has been empirically demonstrated to be a useful paradigm for revealing varying patterns of stress, resources, coping and adaptation in families with preschool children with disabilities (Deardorff, 1992; McClellan, 1990; McCubbin, 1989; Reddon, 1989; Redington, 1992).

The problem

The purpose of this study is to utilize a modified version of McCubbin and Thompson's (1987) T-Double ABCX Model of Family Adjustment and Adaptation in order to extend the work begun by Reddon (1989), McClellan (1990) and Redington (1992) to understand more about level of stress, presence of intervening variables and type of adaptation in Alberta families raising preschool children with disabilities. This study will, therefore, analyze data collected from a large sample of urban parents of preschool children with disabilities residing in a major city in

Alberta with respect to the critical dimensions of a modified version of the adaptation phase of the model. Specifically, the study will focus upon the varying patterns of functioning between mothers and fathers, between single mothers and married mothers, and between urban parents and rural parents, in order to extend the research findings in these areas. The study will not only attempt to understand differences in family functioning between different groups of parents but will investigate which independent variables under consideration account for variance in family functioning in families raising preschool children with disabilities.

CHAPTER II

Review of the Literature

Introduction

This chapter begins with a general overview of stress and adaptation in families of children with disabilities. Four different conceptual perspectives on the process of adaptation to the presence in the family of a child with disabilities will then be summarized, specifically, stage theory, systems theory, social ecology theory, and family stress theory. Next, the utility of the T-Double ABCX model as a conceptual framework to guide research into family functioning will be discussed. Finally, research relative to parents of children with disabilities, namely, mothers and fathers, single parents and rural parents, will be presented.

General overview of stress and adaptation

Early research on childhood disability and illness often focused on global statements of maladaptation (Harper, 1991). Moreover, early research also emphasized the "child's problems" as interfering with the family's optimal functioning. Investigators appeared to be influenced by the general assumption that the presence of a child with disabilities in a family contributed to increased stress, of a detrimental nature, across families of children with a wide range of handicapping conditions (Kazak, 1987).

Indeed, families of young children with special needs might be faced with

additional demands beyond those generated in the "typical" family. There can be daily care needs and behavioral problems than can exacerbate difficulties for parents (Rousey, Best, & Blacher, 1992). Parents may be responsible for such additional tasks as implementing special care routines, accessing available resources, responding to a myriad of professionals offering advice regarding their child's development, and planning their limited time for themselves, their other children, and their spouse. Such changes and demands can intensify a family's daily stress and frustration (Able-Boone, Sandall, Stevens, & Frederick, 1992).

On the other hand, there has been increasing recognition that many families cope effectively and positively with the additional demands experienced in parenting a child with a disability. Some studies have even noted benefits created by the presence of such a child in the home, including increased family cohesion, increased involvement, and personal growth of parents (Seligman and Darling, 1989). The most recent literature suggests that families of children with disabilities exhibit variability comparable to the general population with respect to such outcomes as parenting stress, family functioning, and marital satisfaction (Krauss, 1993). Thus, although no one disputes the possibility of highly stressful effects on parents of raising a child with a disability, contemporary research has revealed inconsistencies in the common notion that families of children with special needs experience a high degree of stress and a low level of family functioning (Dyson, 1991).

It has become apparent that increased stress does not necessarily lead to distress or dysfunction in families. The recognition that a negative outcome is not

inevitable in families of children with disabilities, and that outcomes can range from successful adaptation to maladaptation, has led to a focus on models of stress which can explain this variation in response (Sloper, Knussen, Turner, & Cunningham, 1990). There are several different perspectives regarding the process of the family's adaptation to the presence of a child with disabilities (Bernier, 1990; Gallagher and Bristol, 1986). In the following section, four conceptual frameworks, predominant in the current literature, namely, stage theory, family systems theory, social ecological theory and family stress theory, will be discussed.

Stage theory

Most articles dealing with family adaptation to a child with a disability from a developmental perspective are based on conceptualizations of bereavement (Bernier, 1990). Within this context, parent adaptation to a child with a disability is seen as occurring in a series of stages or a stepwise progression, characterised by initial shock, followed by a period of disorganization, and eventual adaptation. There is, however, little quantitative research available on the stages of adjustment theories. Most of the literature is based on clinical judgement of observed phenomena or retrospective gathering of information from parents (Bicknell, 1983; Blacher, 1984). Nevertheless, Blacher (1984) concluded in her review that the literature dating back to 1950, is quite comprehensive and consistent in identifying typical stages of adjustment.

According to stage theory, the first stage parents experience is the initial

reaction or crisis response, comprised of different forms of shock, denial, and disbelief. Feelings of detachment and bereavement are common at this stage as the parents mourn the loss of their expected and hoped-for perfect child, and are simultaneously attempting to adjust to and assume the care of their child with a disability (Berry, 1983; Fajardo, 1987). Blacher (1984) identified the second stage as one of continuing feelings and responses. Guilt, anger, shame, and resentment are emotions associated with this stage. The "Why me?" question might predominate. Furthermore, anger and resentment can lead to depression. Devastation at the child's prognosis, or repeated disappointment with the slow progress made by the child, compound the development of depression. This stage has been described as the most painful, the main concern being a high risk of divorce (Leyendecker, 1982; Wright, 1976). Other characteristics of this stage are: lack of energy and motivation, loss of parenting self-esteem, and possible parental rejection of the child. The final stage is one of adjustment and acceptance. This is the point where parents accept the reality of caring for a child with a disability on a daily basis. Parental adjustments are made to the child's limitations and prognosis. It should be noted that the sequence and duration of some of the stages of adjustment vary, and may re-emerge.

Current perspectives of families question the appropriateness of applying the concept of grief to all families of children with disabilities, and of assuming that all families adapt to the birth of such a child by progressing through various "stages" of adaptation culminating in acceptance. Instead, adaptation might be viewed as a

lifelong process that occurs within the context of the family's developmental life cycle (Hanline, 1991).

The original stage models were borrowed from the death and dying literature in which the final stage is acceptance. Death, however, is final, whereas living with a child with disabilities can be a daily reminder of the loss of the perfect child, as well as a possible source of stress (Teel, 1991). Thus, the concept of chronic sorrow, rather than bereavement, is regarded by some authors as more aptly applied to the experience of many families of children with disabilities.

Chronic sorrow suggests that parents experience episodic and recurrent feelings of guilt, anger, and depression throughout the lifespan of the child with disabilities (Berry & Zimmerman, 1983; Blacher, 1984; Teel, 1991; Wright, 1976;). Chronic sorrow is variable in its intensity and duration. It is also contextual, usually occurring during critical periods in the child's or family's life when the disparity between the handicapped child and "normal" children is most evident. When transitions and critical events occur within the life cycle of the family of a child with a disability, they often take on a different meaning because the changes may serve to magnify an individual's special needs and renew feelings of sorrow as parents compare what is with what might have been. Thus, the life-cycle transitions and critical events inherent in the developmental process of raising a child with a disabling condition are often times of increased stress for families.

Fewell (1986) as cited by Seligman and Darling (1989) described six periods that are particularly stressful to parents of a child with disabilities: encountering the

disability, early childhood, school entry, adolescence, beginning adult life, and maintaining adult life. The early childhood years can be quite difficult as the family anxiously watches for their child to achieve certain developmental milestones. Children with disabilities may be slower in reaching certain life cycle or developmental milestones, and some may never achieve them.

In clinical work with parents, Krachovil and Devereux (1988) have observed that those who appear to be well adjusted continue to experience and learn to live with grief. They readily admit to recurring feeling of grief, triggered by unreached milestones, worries about the future, and introspective thoughts. These observations were confirmed by findings from a study by Cameron, Snowdon, and Orr (1992) the purpose of which was to explore the emotions experienced by mothers of children with developmental disabilities. Interview information revealed that parents do indeed experience a grief reaction to the disability. Mothers' emotions, however, did not occur in any predictable sequence and some emotions such as sadness, guilt, anger, and frustration tended to re-emerge throughout the childhood years. Results were perceived to support the concept of chronic sorrow rather than a time-bound grieving experience that culminates in acceptance. The debate continues as to whether closure is ever achieved, and to whether grief is relatively brief or chronic/periodic. Counsellors provide services on the basis of one view or the other.

Trute (1990) criticized the concept of "chronic sorrow" which he viewed as promoting a negative perspective on the functioning of families of children with disabilities. He viewed this perspective as dwelling on deficits associated with family

member response to a child with disabilities. Antonovsky (1987) advocated that investigators focus a little less on the individuals and families who are victims of their circumstances, and look a little more at those who perceive their life circumstances in a more positive manner, using such circumstances for personal and family growth. He called this approach "salutogenic" (as opposed to pathogenic) research. Three salutogenic theoretical approaches which are commonly used in early intervention services are: family systems theory, the ecological model, and family stress theory.

The family systems perspective

Family systems thinking, based on the insights of family therapists, brings a different point of view to the process of parental adaptation to a child with disabilities, moving the focus of attention from the individual to the system (Bernier, 1990).

General systems theory specifies that families, like many groups, share a number of characteristics with some other biological systems. Central to systems theory, is the notion that parts can only be understood as they relate to one another and to the whole. Clinically, this means that systems theory emphasises transactions, social interaction, and person-environment exchanges and adaptations. Thus a family system is perceived not just as a collection of individuals, but as an entity that exerts a powerful influence on its constituent members while simultaneously being subject to their influence.

The concept of homeostasis is an important element in systems theory.

Basically, systems are said to operate within a range of stability. Homeostasis is the dynamic balance of the system; its manner of maintaining equilibrium. This refers to the concept that families develop recurring patterns of interaction which serve to maintain stability. Homeostasis addresses a family's reluctance to change, and how it works to remain the same (Olson & Kwiatkowski, 1992). Changes in one part of the system, however, may precipitate changes in another part of the system, thus altering the nature of the relationship and creating disequilibrium. When homeostasis is threatened, and disequilibrium is impending, feedback signals the system to activate error-correcting responses to re-establish homeostasis. Feedback can be provided in the form of emotion, behaviour, and/or information, and can be negative or positive. Negative feedback counteracts information coming into the system and discourages change, whereas positive feedback facilitates change (Olson & Kwiatkowski, 1992). Through feedback, a family that has become unbalanced might seek to reestablish homeostasis either by returning to the previous set of relationships, or by change and adaptation (Bernier, 1990).

A family system that includes a child with a disability or chronic illness may certainly be at risk for stress and imbalance (Berry, 1992). The birth of an infant with a disability, a newly diagnosed disability, or a change in prognosis or status of a child with a disability, may influence the stability of the family. Homeostasis, the family balance, will have to change to incorporate the new member and the needs associated with that person's condition. Previously established patterns of interaction may not be effective in meeting these new demands. Since a family will work to

maintain its previous balance, the process of establishing a new revised state of homeostasis may be a turbulent one.

In a Canadian study, Trute (1990) appeared to adopt a systems perspective when he focused on the parental subsystem relative to family functioning in 88 families of young children with developmental disabilities. Findings suggested that specific aspects of marital adjustment, namely, dyadic cohesion and dyadic consensus were found to be tied to achieved level of family functioning. Furthermore, educational level of the father appeared to facilitate more positive adaptation of the family as a unit. Findings also indicated that families of children with disabilities appeared to be no different than other families in their levels of organization and functioning when compared with the norms established for the Family Assessment Measure III (Skinner, Steinhauer, & Santa Barbara, 1983). This provides support for a more salutogenic approach to families of children with disabilities.

More recently, Martin & Cole (1993) conducted a study of mothers and fathers of children with disabilities, from the systems perspective. These authors focused on subgoups within the family unit. Dyadic, as opposed to global family cohesion and adaptability traits were assessed. Findings indicated that father-child cohesion was highly correlated with marital cohesion. Conversely, fathers who were disengaged from their wives were likely to be disengaged from their children as well. On the other hand, mother-child relationships were not as closely related to the marital relationship. Other findings indicated that family adaptability is better conceived in terms of two rather than three family subsystems. This study reflected

the family systems theory notion of the reciprocal relationship of the family unit as a whole, and certain family subgroups. Such information could be useful in understanding and improving family dynamics for the benefit of individual and subgroup functioning.

The social ecological model.

The social ecological model has many similarities with family systems theory. For example, assumptions in such statements as "the family is an interrelated unit" and "intervention in any aspect of the unit can affect all the other parts of the unit" are merely restatements of family systems concepts (Olson & Kwiatkowski, 1992). The social ecological model assumes and predicts that changes in one part of a system will produce changes in other parts of the system. The child's behaviour is part of such a system (Bailey & Wolery, 1992).

The social ecological model as described by Bronfenbrenner (1979) views the family as a system nested within a number of other societal systems. Specifically, the child and his family is seen at the centre of the nest, influenced by several different societal layers as one moves outwards to the edge of the nest. Dysfunction is perceived as a product of a continuous malfunction in child-environment transactions which prevent children from organizing their world adaptively (Olson & Kwiatkowski, 1992).

A key tenet of the social ecology point of view is that if one wishes to change behaviour, one needs to change environments (Seligman and Darling, 1989). The

social ecology view further asserts that a child or family can be affected by events occurring in settings in which the person is not even present. An example is that a child may be affected by the conditions of parental unemployment, which may be a consequence of the health of the economy, which can be affected by events occurring on a national or international scale, such as war.

The first of Bronfenbrenner's (1979) subsystems impacting on the child is the microsystem, which is the pattern of activities, roles, and inter-personal relations experienced by the family with such components as mother-father, mother-disabled child, mother-nondisabled child, and so on. The microsystem functions in a mesosystem, comprising a wide range of settings in which a family actively participates, for example, medical and health-care workers, extended family, friends, neighbours, work/recreation associates, church, and community resources. The mesosystem is embedded in and influenced by the exosystem. The exosystem is described as settings in which the family is not actively involved, yet they can be affected by, such as the mass media, the health care system, the social welfare system, and education acts. Finally, the exosystem is embedded in and influenced by the macrosystem, which is the ideological or belief system inherent in the social institutions of society. It includes ethnic, cultural, religious, socioeconomic, and political elements (Bailey & Wolery, 1992; Seligman & Darling, 1989).

Applied to families of children with disabilities, the social ecological perspective suggests that it is not sufficient to study only the child, nor the child and his/her mother, nor the dynamics occurring in the family; it is also necessary to

examine the family within the context of larger social, economic, and political realities.

A number of researchers have demonstrated the importance of social support, and personal and family resources in successful family adaption. Able-Boone, Sandall, Stevens, and Frederick (1990) conducted an interview study from the social ecological perspective in which parents of infants and toddlers with disabilities were asked about their support resources and needs. These families' most frequently identified needs for support were financial assistance, information, and emotional support. Parents generally found extended family members and professionals most helpful, and social organizations and friends least helpful. Professionals were considered supportive when they provided positive and useful information and assistance, but not supportive when they overemphasized child limitations. The families interviewed felt a need for more informal support from friends, neighbours, co-workers, and social groups.

Kazak (1987) looked at stress, and social network size and density, in three samples, namely, children with disabilities, children who were chronically ill, and children without disabilities. It was found that overall, families of children with disabilities were not more isolated than other families, suggesting the importance of examining different types of help, the roles of social support, and the meaning of supportive relationships for these families. The role of social support in mediating stress and influencing overall family functioning and parent-child interactions has been highlighted by other studies in the research literature (Crnic, Greenberg,

Ragozin, Robinson, & Basham, 1983; Dunst, 1985; Dunst, Leet, & Trivette, 1988; Dunst, Trivette, Gordon, & Pletcher, 1989).

In summary, results have suggested that social support, which assists families in coping with stressful life events, seems to affect parents' sense of well-being and life quality, perceptions of their child, and interactions with their child (Dunst & Trivette, 1989). These findings lend support for the social ecological perspective.

Family Stress Theory

Hobfoll and Spielberger (1993) said that family stress research has greatly benefitted from a very close tie between theory and measurement. No other area of stress research has models and measurements so closely connected.

Family stress theory views the family as a unit which is continuously adapting to internal and external change. The birth of a child with disabilities and the long-term adaptation which result are viewed as one of many factors to which a family adapts and adjusts. The family stress model seeks to describe events acting upon the family - events to which the family must respond. The foundations of this perspective can be found in Hill's (1949) classic ABCX theory of family stress. In this theory/model, the characteristics of the stressor event (A), the family's internal crisis-meeting resources (B), and the family's definition of the stressor (C) contribute to the prevention or precipitation of a crisis (X). This crisis constitutes any marked or decisive change for which old family patterns are inadequate, and the extent to which the stressor affects the family's ability to function (Olson & Kwiatkowski, 1992).

According to Deardorff (1992) the crisis (X) can be viewed as the point in time when a physical or a mental condition, a developmental delay, or "at-risk" concerns, result in referral of the child and family for early intervention services. In this context the crisis does not carry a stigmatizing value judgement that the family has failed or is in any way dysfunctional. Instead, crisis (X) is defined as a point of imbalance for the family where the demands that the stressor places on the family capabilities require change.

The original Hill (1949) model focused mainly on pre-crisis variables that account for differences in family ability to cope with the impact of a stressor event and the degree to which the outcome is a crisis for the family. The model outlined a set of major variables and their relationships that have remained virtually unchanged for over 30 years (Huang, 1991).

In 1983, however, McCubbin and Patterson expanded Hill's original theory when they proposed a Double ABCX Model of Family Adjustment and Adaptation to include post-crisis adaptation. At this time, the concept of "pile-up" of stressors was introduced. McCubbin and Patterson (1983) maintained that no stressor occurs in isolation; a family may experience many stressful events simultaneously, affecting the way the family's resources can be expected to resist or ameliorate crises. For example, a family with a newly diagnosed infant who is at-risk or presents with a disability may have a number of events which are occurring simultaneously, serving to deplete family resources. The number of stressors and previous commitment of resources may also influence the interpretation of the outcome of the crises (Olson

& Kwiatkowski, 1992).

Further expansion of the Double ABCX model resulted in McCubbin and Thompson's (1987) T-Double ABCX Model which described several types of families and their style for adapting to crises. McCubbin and Thompson (1987) proposed that particular family characteristics will influence how the family uses resources and interpretes an event. Thus these theorists included family type in the T-Double ABCX model. This model, like its immediate predecessor, is composed of two phases, an adjustment phase and an adaptation phase, separated by a period of family crisis or imbalance when the family's homeostasis is upset. The first stage of the model, the pre-crisis or adjustment phase, is concerned with family strengths and capabilities that explain why some families are better able than others to adjust to relatively minor changes, transitions, or demands which do not require major alterations in family functioning (McDonald et al., 1988). The post-crisis or adaptation phase, concerns those situations whereby the resulting hardships are numerous and severe, demanding more substantial changes in the family system, specifically in its rules, its boundaries, and overall patterns of behaviour (McCubbin & McCubbin, 1989).

In the adaptation phase of the T-Double ABCX Model, the variables of emphasis have been redefined and expanded to include the following: the AA Factor, representing the "pile-up" of family demands that make adaptation more difficult; the R Factor, representing the family's level of regenerativity; and the T Factor, representing the family's typology. Also included in the adaptation phase of the T-

Double ABCX Model are: the BB Factor, representing the family's adaptive strengths, capabilities, and resources; the BBB Factor, representing the support received from friends and the community; the CC Factor, representing the meaning the family assigns to the situation or event; the CCC Factor, representing the family's world view and sense of coherence that determines their situational appraisal; and the PSC Factor, representing the problem solving and coping strategies utilized by the family in managing potential crisis situations. The outcome of these family efforts to achieve a new level of balance and fit, which can range from negative through to positive, is represented by the XX Factor, the family's level of adaptation (figure 1). A detailed explanation of the critical dimensions of this model is located in Appendix A.

McCubbin and McCubbin (1993) said that the family system and its functioning involve a very complex process of interacting individuals, personalities, and family unit characteristics, all of which influence each other to shape the family's course of changing itself. These changes may lead to successful adaptation. According to Deardorff (1992) adaptation (XX) is defined as the outcome of family efforts to achieve a new level of balance and fit at both the individual-to-family and the family-to-community levels of functioning. Because the T-Double ABCX Model is dynamic and because families are always changing, each family will fall somewhere along the adaptation continuum at any given point in time. Bonadaptation refers to successful adaptation whereby a balance in the family system is achieved that facilitates organization and unity, while promoting individual growth and

development. Maladaptation refers to unsuccessful adaptation that leads to exhaustion, and can create another crisis. Maladaption, which can include denial and other inappropriate coping strategies can serve to exacerbate pile-up of demands, increasing stress in the family.

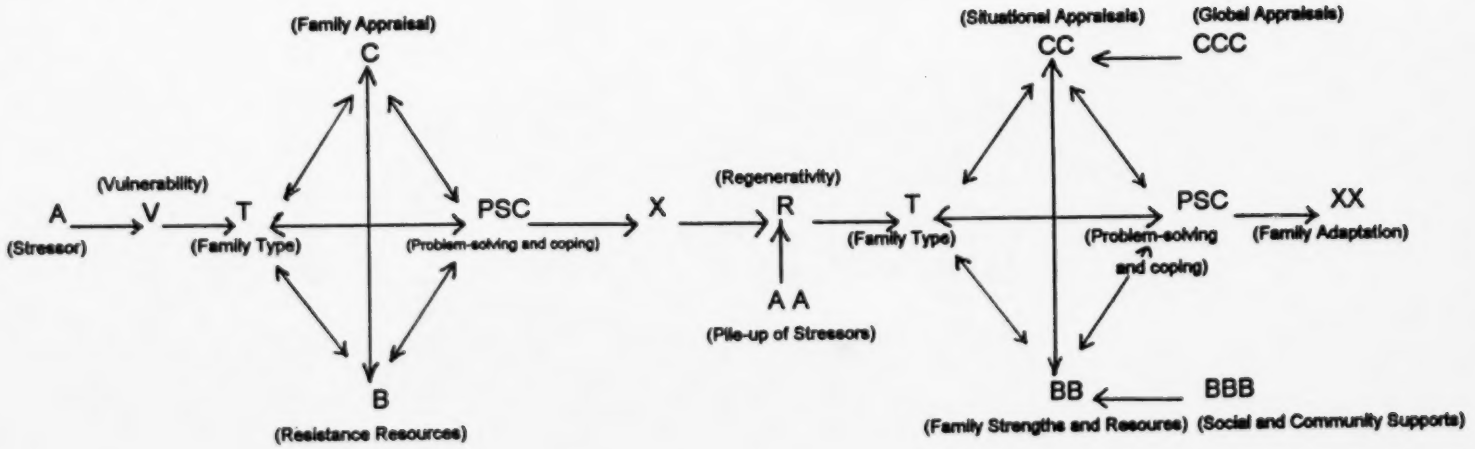
The T-Double ABXC model of family adjustment and adaptation

A number of investigators have demonstrated the utility of the T-Double ABCX model, or its previous version(s), as a conceptual framework to integrate and guide research efforts (Bristol, 1987; Crosbie-Burnett, 1989; Deardorff, 1992; Koop, 1993; Lavee, McCubbin & Olson, 1987; McCubbin, 1989; McLellan, 1990; Orr, Cameron & Day, 1991; Redington, 1992; Reddon, 1989; Van Hook, 1987; Wikler, 1986; Winton, 1990).

Wikler (1986) summarized and evaluated the stress literature relative to families of children with intellectual abilities using the Double ABXC model (McCubbin & Patterson, 1983). Bristol (1987) also used the Double ABCX model (McCubbin and Patterson, 1983) to predict healthy family adaptation along the dimensions of marital adjustment, number of depressive symptoms, and in-home environment with families of children having autism or severe communication disorders. Bristol's (1987) results showed that family adaptation was positively predicted by adequacy of social support and active coping patterns. Bristol (1987) contended that a multivariate model, like the Double ABCX was needed to understand the complex relationship between having a child with handicaps and

FIGURE 1

The T-Double ABCX Model of Family Adjustment and Adaptation



McCubbin and Thompson (1987)

successful family adaptation. It was also suggested that the model be used for developing intervention strategies.

Reddon (1989) used a modified version of the adaptation phase of the T-Double ABCX model (McCubbin & Thompson, 1987) to successfully predict family functioning from the relative contributions of the pile-up of stressors, family resources, social support, coping patterns, and problem solving strategies of 16 families of preschoolers having a handicapping condition. Each of the dimensions of the model measured accounted for a significant amount of the variance in the measure of adaptive functioning. Limitations of the study, however, were the small sample size and the omission of a measure of the appraisals dimension of the model. Although Bristol (1987) and Reddon (1989) used different instruments to measure the pile-up, intrafamily resources, social supports, and family adaptation, their regression analyses obtained similar results, indicating the usefulness of the model in conceptualizing the process of adaptation in families of young children with disabilities. A noticeable difference between the studies was that Reddon (1989) did not measure the appraisals dimension, yet on the other hand, Bristol (1987) found that appraisal measures were significant predictors of family adaptation in her sample of mothers, suggesting the importance of this dimension.

McLellan (1990) extended Reddon's (1989) research to include an intervention component with 17 families of young children with a handicapping condition. Reddon's findings were replicated in terms of similar patterns of stress, resources, coping, and adaptation. Deardorff's (1992) focus was also intervention.

She presented a case study to illustrate how the model could be used for the purposes of assessment, early intervention and service plan development, and outcome.

In complete contrast to families of young children with disabilities, Van Hook (1987) used the Double ABCX model to describe farm families in crisis. Needs were identified and intervention strategies were suggested. This study illustrated the variety of different research efforts that have attempted to validate the model and its propositions and apply results to service delivery.

A study conducted by Lavee, McCubbin, and Olson (1987) was regarded by Huang (1992) as a key study of the 1980s. A causal modelling approach was used and results confirmed the hypothesized pattern of relationships postulated by the model. Results indicated that family life events significantly influenced post-crisis strain. Family system resources and social support facilitated adaptation, but in different ways. Specifically, family system resources affected adaptation directly, whereas social support reduced the post-crisis strain. In contrast, results of a study conducted by Orr, Cameron and Day (1991), which also used the causal modelling approach, suggested that the relationship between the A,B,C, and X variables could be viewed as a linear chain following an A to C to B to X path. This differs from the interactional perspective presented by McCubbin and Patterson (1983) where both perception and resource factors were postulated to affect stress simultaneously. Comparisons of the results between these two studies are difficult to make given the differences in variable definitions, measurements, sample size (e.g. 1140 in the Lavee

et al. study as opposed to 86 in the Orr et al. study) and nature of samples (e.g. families of children without special needs versus families of children with special needs).

The suggestion by Orr et al. (1991) that the model be modified is not unique. Other modifications to different aspects of the T-Double ABCX model, and its predecessors, have been proposed by different researchers. Koop (1990) proposed a revised model which resembles the original Hill (1958) model in its simplicity, but incorporates the notion of multiple simultaneous stressors (pile-up) as well as coping. McCubbin and McCubbin (1993) have recently described more changes and expansions to their T-Double ABCX model.

Such modifications reflect ongoing research to improve the model, through either simplification or elaboration. Reddon (1989) and McClellan (1990) modified the T-Double ABCX Model (McCubbin & McCubbin, 1991) to investigate the patterns of stress, coping, and adaptation in families of preschool children with moderate to severe mental and physical disabilities. Only the adaptation phase was used in these studies, with the omission of the Regenerativity and the Typology dimensions. McDonald et al. (1988) had already pointed out that they considered the adaptation phase of the T-Double ABCX Model to be a useful framework for conceptualizing the process by which families adapt to the chronic stressors involved in raising a child with special needs. Specifically, the model allows researchers to take a more comprehensive view of the interactions of variables which may be contributing to stress and coping, in the context of the family system existing within

a larger social system. None of the other theories/models discussed by this author are considered to be as comprehensive.

The T-Double ABCX model is compatible with and complementary to the perspectives previously summarized, incorporating aspects from all theories. From stage theory, stresses relative to transitions, crises, and life-cycle issues can be listed under AA as pile-up of stresses and demands. From family systems theory, family characteristics such as coping style, discernable boundaries, and rules can be identified under BB as family resources. From the social ecological model, community resources available for the family to access and interact with, as well as other types of social support can be listed under BBB. Again from family systems theory, the family's values and beliefs, which dictate family rules and permeability, can be addressed under CC and CCC as perceptions. Furthermore, homeostasis from systems theory is not incompatible with family adaptation (XX) or with pile-up (AA).

Thus, because of its eclectic nature, the adaptation phase of the T-Double ABCX model, with modifications (figure 2) was selected to guide the current research. This modified model recognizes the social and contextual nature of adaptation over time. It also addresses the possibility that healthy adaptation rather than pathology may characterize the family's response to stress. Furthermore, it provides for assessment of active coping as well as passive support. Finally, it has been empirically demonstrated to be applicable to adaptation in families of handicapped children (McClellan 1990; Redington, 1992).

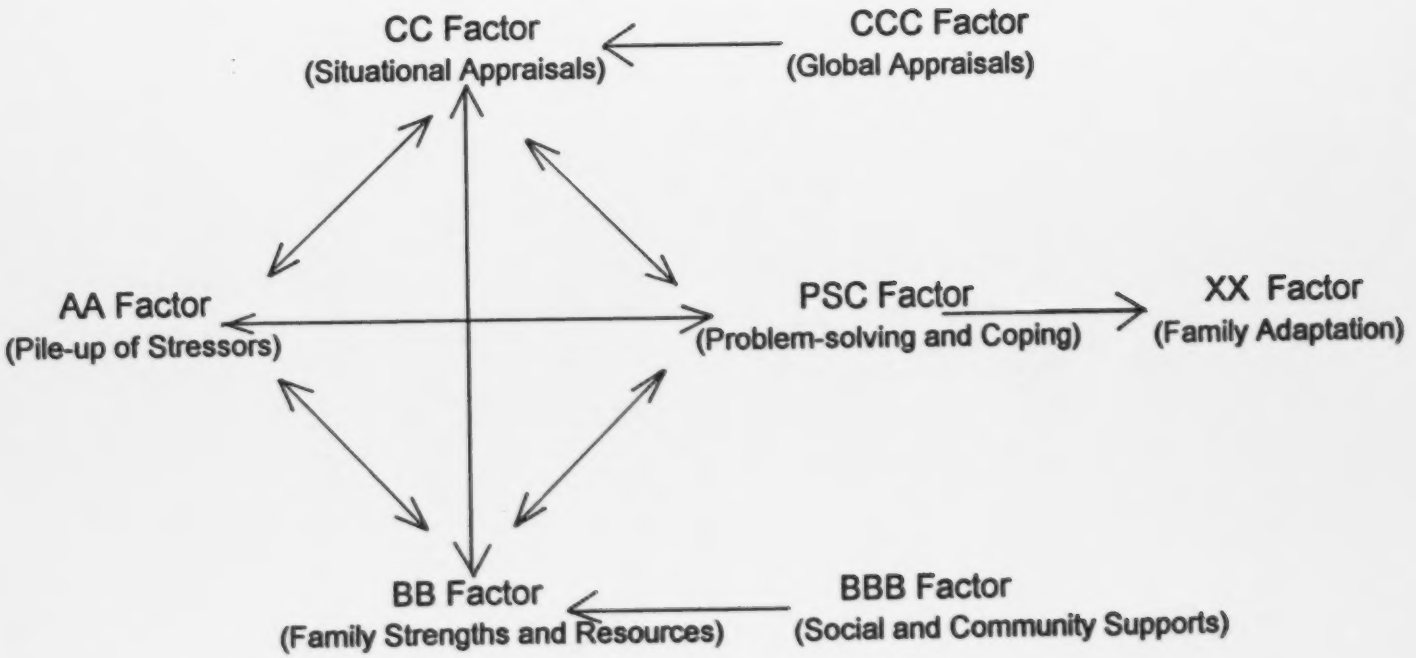
Summary

Current perceptions of families of children with special needs are undergoing change. In the past the child was viewed as a separate entity from the rest of the family; as the "identified patient." The presence in the family of a child with special needs was approached from the frameworks of mourning, stress, and family dysfunction. Current perspectives do not presume a grieving process with a final acceptance stage, nor family deficits. Risk for increased stress, however, is acknowledged, as is the multiplicity of factors that contribute to adaptive functioning (McClellan, 1990). Parental adaptation to having a child with a disability is an on-going process that occurs within the context of the family's developmental life cycle (Hanline, 1991) and also in the context of the social environment, namely, current living conditions, socioeconomic factors, and societal influences.

Four conceptual frameworks, predominant in the current literature, were reviewed and discussed in terms of their ability to guide research efforts and promote consistency across studies in the field of family adaptation and functioning. Taken as a whole, the evidence reviewed supports the validity of the T-Double ABCX model, or modification thereof, for examining adaptation and associated variables in families of children with disabilities.

FIGURE 2

The Modified T-Double ABCX Model of Family Adaptation



Mothers and Fathers

Although the emphasis thus far has been on family functioning as opposed to individual functioning, Walker (1985) cautioned against the notion of one family definition of any crisis situation, as if the family presented a unified mind to all situations. Walker (1985) postulated that each family member experiences a stressful event in a unique way, and attaches a unique meaning to it. These unique meanings may enable family members to work together towards crisis resolution, or alternatively, to prevent resolution from being achieved. What is important is an understanding of the individual perspectives regarding stressful situations, and how these perspectives relate to behaviours. Hobfoll and Spielberger (1992) indicated that both individual and family loci are of critical importance in the study of family stress. They argued that the "the family as a group is not coping if even one member manifests distress symptoms."

In terms of unique perspectives of mothers and fathers in families raising children with special needs, when Sloper, Knussen, Turner, and Cunningham (1990) looked at studies of factors related to stress and family functioning, it became apparent that most have concentrated on the mother. Over the years, as investigators have studied conditions that appear to promote successful adaptation in families, they have tended to rely upon maternal reports, thus omitting to explore the differences that may exist between family members in their perception of the effect of a child with disabilities.

Yet, the importance of the father cannot be overestimated. He is repeatedly

referred to (in legislations and research) as a key figure in the family. His role in the family, long relegated to breadwinner and disciplinarian, has been more recently recognized as a more multifaceted one. A better understanding of the father is necessitated not only by the lack of research, but by the fact that his role has changed during the recent generation. Fathers, whether married or single, are taking part more visibly in what has traditionally been considered female aspects of child care and home life. This participation does not typically equal the mother's, however, even when both parents work full time (Greif & Bailey, 1990). In terms of hands-on involvement with children, in a study done by Bristol, Gallagher, and Schopler (1988) it was noted that fathers of children with disabilities assumed less responsibility than comparison fathers for child care, even in mother-employed families. Decreased father involvement in child care was however specific to the child with the disability, not to the siblings, and was negatively related to the severity of the child's atypical behaviours. Clinical observations of families raising young children with disabilities by Krachovil and Devereux (1988) also indicated that mothers usually provide child care even though they may struggle to do so. Some fathers tended to avoid the situation, frequently turning to work. Sometimes a spouse was observed to be "unavailable" to support the other spouse supposedly because of the effort needed to maintain his or her own equilibrium. Thus, there appears to be differences in involvement in child care and in coping skills utilized.

In terms of demographic variables, Trute (1990) stated that in his study of 88 families of young developmentally disabled children, family functioning was tied to

paternal education and family income. Education level in mothers and fathers was found to be related to their social network characteristics. In particular, paternal education was related to father's number of friends, number of confidants, and number of persons they could turn to in an emergency. Maternal education was most strongly related to the number of professionals to whom mothers had access.

Regarding differences in perceptions of stress, coping, and adaptation in the family, little information seems to be available in these respects for fathers and how their perceptions may be compatible to or different from those of mothers. The absence of father-related data has, therefore, resulted in a one-sided view of the issues associated with raising a child with disabilities. In the few studies that have examined individual differences in mother's and father's perceptions of stress, however, results have been equivocable (Beckman, 1990).

For example, Kazak (1987) conducted a study whereby mothers and fathers of 125 children with disabilities/chronic illness were compared with parents of 127 matched children without disabilities from three separate samples. Comparisons were made in terms of personal stress, marital satisfaction, and social network size and density. Although McCubbin and Thompson's T-Double ABCX Model of Family Adaptation was not the conceptual framework for the study, results indicated that only the mothers of the children with disabilities experienced higher levels of stress than comparison parents. Nothing was said about fathers. On the other hand, Frey, Fewell, and Vadasy (1989) conducted a study with 48 pairs of mothers and fathers of children with disabilities between the ages of 8 months and 12 years.

Examination of the personal adjustment of mothers and fathers indicated that depression in father, but not mothers, was related to the child's level of communication impairment. Findings also indicated that mothers and fathers differed in the ways they coped with the stress of raising a child with special needs. Cognitive coping factors, such as problem solving skills, appeared to be more important to the adjustment of fathers than mothers. Fathers who generated better solutions to realistic child-related problems appeared to have better personal adjustment and better adjustment to their child. Other findings were that adequacy of the social network predicted adjustment for both fathers and mothers. While such findings might be important in terms of intervention, the wide age range of the children in this study, however, limits the generalizability of findings to parents of preschool age children with special needs.

Beckman (1990), however, did focus on parents of preschool children with disabilities. A comparison was done of 27 families of children with disabilities and 27 families of children without disabilities aged between 18 months and 72 months. Findings confirmed the hypothesis that mothers and fathers would show differences in the amount and type of stress they experienced as measured by responses on the Parenting Stress Index (Abidin, 1983). Differences were not obtained on the Child Domain or the General Life Stress Domain, but differences were obtained on the Parent Domain of the Parenting Stress Index. Mothers reported significantly more problems than did fathers on scales pertaining to depression, restrictiveness of the parental role, sense of competence, relationship with spouse, and health. Fathers

reported significantly more problems with attachment. There was no difference between mothers and fathers with respect to social isolation. Parents of children with disabilities (between groups) reported more stress than parents of children without disabilities on all of the scales except attachment. In general mothers reported more stress than fathers, suggesting that mothers and fathers had different perceptions of the effect on their lives of their child with disabilities.

McClellan (1989) also compared perceptions of mothers and fathers of preschool children with disabilities using the Parenting Stress Index. Findings were similar to Beckman's (1990) in that mothers reported more problems on the depression scale. Fathers, however, reported greater feelings of isolation from their peers, relatives and other sources of emotional support, while mothers appeared to feel less restricted by the parent role.

More recently, Krauss (1993) presented data concerning similarities and differences in child-related and parenting stress between mothers and fathers of 121 toddlers with disabilities. Although mothers and fathers reported comparable levels of parenting stress, fathers were consistently more troubled than were mothers by various aspects of their relationship with their child. Krauss said the data suggested that greater attention to the capacity of fathers to "read" their child with a disability and to feel reinforced for their efforts by their child is warranted. Mothers were more affected by their social support networks than were fathers. Fathers may turn inward, towards their families, whereas mothers turn outwards, towards their social support networks, in the face of a "crisis" regarding their child's development. The

benefits derived from these spheres clearly differed between the mothers and the fathers.

The inclusion of fathers as well as mothers in studies of family functioning is consistent with the view of the family as a transactional system of reciprocal and interactive influences. In the few studies that have compared mothers and fathers in terms of functioning, results have been equivocable. Moreover, most of these studies have not focused exclusively on families of children in the preschool age range therefore limiting generalizability of findings. Cooper and Allred (1992) stated that the limited research that has considered fathers of children with special needs suggests three important points. First, fathers and mothers react differently to the birth of a child with a disability, fathers being more concerned with future-oriented issues while mothers are more concerned with the here-and-now. Second, fathers typically experience less stress and use different coping strategies in dealing with their child with a disability. Finally, the father's attitude towards the child with the disability significantly influences the family's ability to adapt to this situation.

In summary, until quite recently, the father has been overlooked in the family unit of a child with special needs. Greif and Bailey's (1990) review of five major social work journals published during a 27 year period indicated that the literature on fathers is indeed quite sparse. The limited view of fathers that does emerge portrays them as perpetrators, as missing, and as embattled. A more accurate picture is certainly needed to assist understanding of the state of the family raising a child with disabilities.

The single parent

One of the more dramatic changes in today's society is the increasing divorce rate and the consequent increase in the proportion of children who live in single parent families. Usually the parent living with the children is the mother (Bailey & Wolery, 1992). Bristol, Reichle, and Thomas (1987) cited by Bailey and Wolery (1992) reviewed the literature on separation and divorce in families of children with disabilities. Although the evidence is mixed, there are some indications that the divorce rate is higher among these families. Divorce typically results in a substantial decrease in income; furthermore, mothers often have difficulty obtaining support payments from fathers. Consequently many single parent families, whether divorced or never-married, live in poverty or under financially stressful conditions. Also, assuming full responsibility for all family functions without the ongoing support of a partner often means that single parents live with a high degree of stress (Bailey & Wolery, 1992).

Trute (1990) concluded from his research into family functioning that the strengthening of the parental subsystem should be a primary concern in assisting the family to maintain a stable and nurturing home environment. He stated that cohesiveness and closeness as couple should be recognized as a key element in ultimate family adjustment. This proposition raises an important question about single-parent families in terms of possible risk for family maladjustment due to lack of a spouse or partner. Because studies of two-parent families have found that spousal support plays a key role in moderating the stress and coping with the

challenges of raising a child with special needs, it would seem possible that lack of spousal support in such a situation might exacerbate stress. The possible physical and emotional demands of children with disabilities cannot be shared in single-parent families. Often missing are the perspective, advice, and encouragement that might be provided by spouses (Schilling et al., 1986).

Vadasy (1986) suspected that single parents of disabled children will experience greater stresses in their family system than parents in intact families. Yet most assumptions in this respect are intuitive, because empirical data is scarce. If role functions assumed by family members of two-parent families are shared, demands are decreased for any one family member. Such sharing would not likely occur for the single parent. Other potential problems for the single parent relate to economical, physical, and emotional needs. Vadasy (1986) pleaded for the needs of this under-served population to be addressed.

Yet when Schilling et al. (1986) conducted a study on differences between 33 single mothers and 48 married mothers of children with disabilities aged between 2 years and 10 years, findings were contrary to expectations. No differences were found between groups in terms of adaptation to a child with disabilities. No differences were found with respect to perceptions of activities related to coping. Finally, no differences were found regarding satisfaction with aspects of family life (such as neighbours, work and money). Findings suggested that single and married parents of children with disabilities have much in common regarding the challenges and frustrations involved in raising such a child. One interpretation made was that

many of the challenges (that is, negative aspects) associated with raising a child with special needs apply regardless of marital status. It was hypothesised that fathers in general, including fathers of children with disabilities in two-parent families, typically take on few child care responsibilities (Schilling et al., 1986). Different findings might have been obtained if the age range of children had been confined to a specific developmental period, such as for example, the preschool years.

Relative to the Schilling et al. (1986) hypothesis regarding fathers in general taking few child care responsibilities, Marcenko and Meyers (1991) conducted a study of mothers of children with developmental disabilities aged from 4 years to 17 years with a view to exploring who shares the burden of child care. Findings indicated that the most striking differences between married and single women were on items concerning the perceived helpfulness of husbands versus the child's father. It appeared that single mothers could typically count on little support from the child's father and his family in terms of caring for a child with handicaps. Although the majority of married mothers in the study perceived their husbands as being very helpful to them, subjective perceptions and objective observations of concrete assistance did not correspond. The actual daily responsibility for the care of the child with disabilities appeared to fall to the mother regardless of marital status. Once again, the age range of the children in the study was extremely wide, including children with vastly different developmental needs, and families in different stages of the family life cycle. Different findings might have been obtained had the age range of the children been confined to a specific period of development.

Crnic & Greenberg (1990) suggested that emotional support from friends somewhat more than husbands or partners, tends to buffer most mothers from the adverse effects of the daily hassles of parenting. Apparently, daily hassles seem to be more predictive of maternal, child, and family status than major life stress. Lovell and Richey (1991) would agree, in that they have emphasized social support as a critical component in adequate child rearing, especially among multi-problem families. In terms of the single parent, Schilling et al. (1986) speculated that the social isolation and financial constraints of single parenthood may sap energy and hope away from single mothers.

Burke (1987) suggested that single-parent families of children with disabilities might certainly be a vulnerable group in need of more support and guidance from health and social services. Results of a comparison of 30 single-parent mothers of children with disabilities, 30 married mothers of children with disabilities, and 30 single and married mothers of children without disabilites, indicated that single-parent mothers of children with disabilities reported more areas of concern related to finances, housing, and day-care access and use. Both groups of mothers of children with disabilities reported "nerves" as the most common health problem, but only single mothers reported use of tranquilizers to cope.

McCubbin (1989) conducted a study to examine specific characteristics of the family system and the child's health in single and in two-parent families of a child with a similar impairment, in order to target possible areas of intervention for health professionals working with these families. Ages of the children in the study ranged

from 3 years to 22 years. Contrary to expectations, findings indicated no significant difference in family stress between single-parent and two-parent families. There were also no significant differences in the family resources of esteem/communication, mastery/health, extended family social support, and the child health indices of overall physical health status and health improvement. Single-parent families were significantly lower on financial well-being and the mother's coping relative to maintaining family integration, cooperation, and optimism about the situation. Single-parent families, however, rated higher on family adaptability than two-parent families, perhaps reflecting an ability to be more flexible in family rules, power structure, and role relationships.

In summary, the literature suggests that although the demands inherent in raising a child with special needs might not differ in the perceptions of mothers regardless of marital status, the available resources to deal with such demands might differ tremendously. Little systematic research has been done, however, that identifies the familial, economical, and social resources necessary for successful adaptation to the presence of a child with disabilities in such families, specifically, the preschool child with disabilities.

Rural families

Redington (1992) conducted a Canadian study using a sample of 44 rural families of children with disabilities to test the validity of the adaptation phase of the T-Double ABCX model as well as to evaluate its clinical utility as a framework for

assessing family needs and planning family goals in early intervention. Results indicated that mothers and fathers demonstrated moderate to high levels of resources, capabilities, and family functioning. Findings were compared with those from the studies of Reddon (1989) and McClellan (1990), both of which used small samples from urban locations, and thus some urban-rural differences between parents were considered. There were indications that the rural parents might use a broader base of coping strategies to manage the demands inherent in raising a child with disabilities. The finding of significant differences on the Social Support Inventory (McCubbin, Patterson, & Glynn, 1982) between fathers in the three studies suggested that rural fathers perceived themselves as receiving significantly more support from their informal and formal social networks than their urban counterparts. There were also clinically lower mean scores on the measure of stress between parents in the three studies which was speculated as possibly being indicative of urban-rural differences. The virtually identical mean scores on the measure of family adaptation across the three studies suggested that although differences in resources and coping may have existed, urban and rural families raising children with special needs did not differ significantly with respect to family functioning. Redington (1992) suggested that further research comparing larger samples of urban and rural parents might be warranted.

Redington (1992) did not explain her results relative to characteristics of rurality. Also rurality was not defined. According to York, Denton, and Moran (1989), there is a persistent problem in defining rurality. Apparently no clear,

universally accepted definition exists. Generally "rural" refers to the environmental surroundings, the social systems, and the people who reside in areas that have relatively low population density, usually either in the country, or in small towns and villages (Waltman, 1986). According to Hennon and Brubaker (1988) a small town is considered rural as long as it is outside an urbanized area, and has fewer than 2,500 inhabitants. An urbanized area is defined as a population concentration of at least 50,000 inhabitants, generally consisting of a central city plus suburbs. The word "rural" however, means more than a numerical population limit. Traditionally, it connotes a way of life, and possibly an outlook on life characterized by a closeness to nature, a slower pace of living, and a somewhat conservative lifestyle that values tradition, independence, and self-reliance (Hennon & Brubaker, 1988).

Though the traditional perception of rural communities depicts a more idyllic quality of life with few of the pressures of urban life, rural residents still experience mental illness, family violence, unemployment, and poverty. Moreover, because rural areas are traditionally under-served by human service agencies and professionals, community resources to deal with these problems are often lacking (Waltman, Czarnecki, & Miller, 1991) and could exacerbate the situation.

Because of Canada's physical vastness, parents in rural areas may be at a disadvantage in the availability of services for their children with special needs (Winzer, 1990). In terms of rural families raising preschool children with special needs, this author has accumulated clinical observations indicating the lack of facilities in remote northern Alberta communities in terms of early intervention

services. Occasional telephone consultation between parents in rural areas and professionals based in the city sufficed as intervention. Generally speaking, diagnostic assessment with subsequent verbal and written recommendations was the only assistance given to the family. One might assume, therefore, that rural families would obtain low scores on measures of community resources and social supports. But this was not the case in the Redington (1992) study.

Traditionally, rural communities have been viewed as relying more on informal helping networks for decision making and problem solving than do urban communities (York, Denton, & Moran, 1989). It has been noted that distance orientation for rural people is unique. For example, three miles to the nearest neighbour may be perceived as close. Perception of social support is not therefore directly related to proximity of neighbours or health care centres (Weinert & Long, 1987). Furthermore, the one major and consistent finding available from social support research, regardless of the population being studied, is that informal social support from personal network members has powerful stress-buffering and health-promoting influences (Dunst, Trivette, & Deal, 1988). The effects of informal support are generally greater than that attributable to formal support sources. In the research conducted by Dunst et al.(1988) the effects of informal support were found to be such that it was stated such influences cannot be ignored as a major form of intervention. These authors went so far as to state that family needs should be met by promoting the use of informal, rather than formal, support sources. Extrapolation to rural families raising preschool children with disabilities suggests that the extant

informal supports assumed from the traditional point of view might place rural families in a stronger position than their urban counterparts relative to these buffering variables.

No further studies investigating differences between rural parents and urban parents raising preschool children with special needs could be located. Thus such an investigation might be considered a worthwhile pursuit. Such an investigation is also a logical extension of both the Redington (1992) study and the current study.

In summary, Waltman, Czarnecki and Miller (1991) pointed to rural values, both individual and community, as including: self-reliance, preservation of local autonomy, helping one's neighbours, reliance on tradition, and resistance to change. Given that such values might not be typically characteristic of urban individuals and communities, a comparison of rural parents and urban parents of children with disabilities might generate interesting information regarding stress, family functioning and the buffering variables relative to the adaptation phase of the T-Double ABCX model.

Conclusion

A review of the literature pertaining to families of children with disabilities indicates the usefulness of the T-Double ABCX Model of Family Adaptation in providing an ecological framework for describing, measuring, and ultimately profiling varying patterns of functioning and adaptation. Because of equivocable and/or limited studies, however, there appears to be a need for additional investigation to

generate more information about differential functioning within families of preschool children with special needs (in terms of mother father differences) and between families (in terms of two-parent and single-parent differences) in different locations (urban and rural). There also appears to be a need to continue the work begun by Bristol (1987), Reddon (1989) and Trute (1990) in attempting to determine key predictors of family functioning in households which include a young child with a disability, using a larger sample of parents.

CHAPTER III

RATIONALE AND RESEARCH QUESTIONS

Introduction

According to Huang (1991), who reviewed family research conducted over the past 60 years, while McCubbin and associates (1987 and 1991) have attempted to clarify the relationships among the major variables of the T-Double ABCX model, the task has not yet been completed. Huang (1991) suggested that relationships among stressors, resources, perception, and adaptation should be examined in different populations. The purpose of research on family stress and coping is to understand the responses of the family to stress and eventually provide useful information on the prevention and effective management of stress. Huang (1991) maintained that to do this requires an integration of findings into a predictive model. Thus the present study was undertaken to attempt to address these issues.

As indicated in the preceding chapter, a review of the literature has indicated the usefulness of the T-Double ABCX model and modifications thereof in terms of describing, measuring, and profiling varying patterns of functioning and adaptation in families of children with disabilities. Because of equivocable and/or limited studies, however, there is a need for additional investigations to generate more information about differential functioning within families of preschool children with disabilities (in terms of mother-father differences in perspective) and between

families (in terms of two-parent and single-parent differences) in different locations (urban and rural), with Canadian families, thereby extending the work begun by Redington (1992). There also appears to be a need to continue the work begun by Bristol (1987), Reddon (1989), and Trute (1990) in attempting to determine key predictors of family functioning in households that include a young child with disabilities, using a large sample of parents.

The modified T-Double ABCX model

This study utilized a modified version of the adaptation phase of McCubbin and Thompson's T-Double ABCX Model, hereafter referred to as "the model", (Figure 2, page 29) to describe and examine samples and subgroups of parents raising preschool children with disabilities such as those described in the preceding literature review. Only the adaptation phase of the model was utilized because by definition, families of young children with disabilities are assumed to be functioning within the adaptation, or post-crisis phase of the model. Furthermore, both the "R" factor and the "T" factor were omitted for the purposes of the current study.

McCubbin and McCubbin (1991) stated that "R" refers to a family's level of regenerativity, determined in part by the concurrent pile-up of demands (stressors, transitions, and strains) interacting with the other dimensions of the model. The "R" factor was not further explained, nor were suggestions given regarding measurement of this factor. Thus, "R" was omitted from this study.

McCubbin and Thompson (1991) indicated that "T" refers to the family typology, namely, predictable and discernable patterns of family behaviour that characterize how a family system typically operates. Such patterns of family behaviour are reinforced by rules and routines in the family. The family typologies proposed by McCubbin and Thompson (1991) are: balanced families, regenerative families, resilient families, rhythmic families, and traditionalistic families. This is an expansion of the four-cell typology developed by Olson and colleagues as cited in McCubbin and Thompson (1991). For the purposes of the current study, however, families were considered as diverse and unique as the individuals within them, and narrow typological categories were therefore omitted. This is in accordance with the opinions of Constantine (1993) who stated that if every family is unique, then the number of different "kinds" of families is infinite. Family typologies that emphasize classification cannot be a full and complete match for the complexities and intricacies of real families. Thus, for the purposes of the current study, the "T" factor was omitted.

Assumptions

The six propositions outlined by McCubbin and McCubbin (1991) regarding the relationship of the dimensions of their model to family adaptation (XX) are as follows:

1. In crisis situations, the pile-up of stressors and strains is related to family adaptation, and this is a negative relationship.

2. In crisis situations, family resources are related to family adaptation, and this is a positive relationship.
3. In crisis situations, the breadth and depth of the family's social support are related to family adaptation, and these are positive relationships.
4. In crisis situations, the family's positive appraisal of the situation is related to family adaptation, and this is a positive relationship.
5. The family's sense of coherence, a world view of a crisis situation, is related to family adaptation, and this is a positive relationship.
6. The range and depth of the family's repertoire of coping strategies when employed to manage a crisis situation are related to the level of family adaptation, and these are positive relationships.

McCubbin's first five assumptions regarding the adaptation phase of the T-Double ABCX model do not correspond to the modified version of the model utilised in the current study (figure 2, page 29). Thus, for the purposes of the current study, assumptions relative to the modified version of the model are as follows:

1. In crisis situations, the pile-up of stressors and strains is related to family strengths and resources, to situational appraisals, and to problem-solving and coping.
2. In crisis situations, family strengths and resources are related to social and community supports, to situational appraisals, and also to problem-solving and coping.

3. In crisis situations, situational appraisals are related to global appraisals, to family strengths and resources, and to problem-solving and coping.

4. In crisis situations, problem-solving and coping (which is related to pile-up of stressors and strains, to family strengths and resources, and to situational appraisals) is related to family adaptation.

Self-report measures were selected to reflect the above dimensions of the model. These measures are described in the "Instruments" section of the following chapter. The self-report measures were administered to 44 families of preschool children with disabilities residing in an urban setting, in order to utilize the model to describe patterns of functioning in families such as those described in the previous literature review.

A series of analyses were conducted to evaluate the representativeness of the families relative to data from normative groups cited in the manuals of the questionnaires utilized. Analyses were also done to examine equality of means on all instruments between mothers and fathers, between couples, and between married mothers and single mothers.

Furthermore, comparisons were done between the urban data set in this study and the data set from a recent investigation by Redington (1992), in which parents of preschool children with special needs residing in a rural area were administered the same measures.

Finally, in order to evaluate the predictive aspect of the model, stepwise regression analyses were conducted to predict family adaptation from the measures related to the critical dimensions of the model. Separate stepwise regression analyses were done for the urban sample of parents, the rural sample of parents, and the combined sample of parents for comparison purposes.

Corresponding to the objectives of the study, namely, to use a modified version of the adaptation phase of the T-Double ABCX model to describe and compare different groups of parents raising preschool children with special needs, and to determine the predictive nature of the model, the preceding literature review lead to the following logical series of questions:

Research Questions

1. What is the relationship between demographic variables and measures of family stress and family functioning in the urban sample of parents raising preschool children with disabilities?
2. How do the responses of the urban sample of parents raising preschool children with disabilities compare to the normative samples as cited in the manuals relative to the measures utilized?
3. To what extent do the responses of the mothers and fathers in the urban sample differ relative to the dimensions of the model?
4. To what extent do the responses of the single mothers and the married mothers in the urban sample differ?

5. To what extent do the responses of the parents in the current study differ from the subjects in Redington's (1992) study of rural parents raising preschool children with disabilities?

6. What is most predictive of family functioning in the urban sample, the rural sample, and the combined sample of parents raising preschool children with disabilities?

CHAPTER IV

EXPERIMENTAL DESIGN AND METHOD

Introduction

This study utilized seven dimensions of a modified version of the adaptation phase of the T-Double ABCX Model of Family Adaptation to describe patterns of functioning in a sample of 44 urban families raising preschool children with disabilities. Participants completed standardized self-report instruments selected to measure the constructs represented by the critical dimensions of the model, namely, pile-up of demands in the family (AA dimension), personal and family strengths and resources (BB dimension), social support and community resources (BBB dimension), situation appraisals (CC dimension), global appraisals (CCC dimension), problem solving and coping (PSC dimension), and family adaptation (XX dimension). A structured interview was also conducted with each participant, that is, the primary caretaker(s) in a specific family, for the purposes of collecting demographic data such as parental age, education, occupation, gross family income, and so on. Data were examined in a series of analyses to meet the objectives of this study.

Participants

Families considered eligible for inclusion in this study were recruited by

personnel from four local Health Centres. Eligibility criteria for participation were broad enough to obtain a cross-section of families having infants and preschool children with special needs. Families could exhibit variations in composition; a family being defined as whatever the primary caretaker considered it to be. Parent participation only was obtained. Sibling participation was not sought in this study due to most families being in the early stages of the family life cycle, with most siblings being too young to complete the self-report questionnaires. Parents were required to reside in the communities served by each of four Health Centres in a large city in Alberta, Canada. Families were required to have living with them at least one preschool child (age from birth to 66 months) with a disability.

The preschool child with a disability was required to demonstrate traits in any of the following broad categories identified by Winzer (1990): intellectual differences, sensory handicaps (including auditory impairments and visual problems), communication disorders (including speech difficulties and language problems), behaviour disorders (including social maladjustment, emotional disturbance and childhood psychoses), physical handicaps and impaired health (including neurological defects, orthopaedic conditions, birth defects, and conditions resulting from infection and disease), and developmental disabilities (including children with pervasive disorders such as infantile autism, and those with multiple handicaps such as cerebral palsy and mental retardation, or deafness and blindness). Although some children might not yet exhibit a specific diagnostic condition, they were required to demonstrate significant delays in one or more aspects of early development.

Delays, disorders or disabling conditions were required to have been identified or diagnosed by the clinical judgment of the nursing or health care staff, or by parental report, or by formal screening procedures and/or formal diagnostic procedures. Finally, participants were required to be willing to devote approximately 2 hours of their time to the completion of paper and pencil questionnaires, and to respond to the demographic questions asked in a structured interview of approximately 30 to 45 minutes duration.

Procedures

City Board of Health cooperation was sought, and obtained, for the purposes of this study. Subsequently, four local Health Centres in the city were asked to contact families who might meet the criteria for inclusion in the study and to notify those families of the research project verbally and by letter. The letter described the rationale for the study, time commitments, and procedures to be utilized. Reference was made to the family's ethical rights, as well as measures taken to protect their identity and confidentiality (Appendix B-1). The letters were followed with a telephone call from Health Centre staff as necessary. Verbal consent to be contacted by this author was accepted either in person, or by telephone, and by completion of the initial consent form (Appendix B-2).

When willingness to learn more about the project, or agreement to participate were expressed, families were then contacted by this author and a meeting time suitable to both parties was arranged. Typically, the initial meeting occurred in the

family home, in the presence of the child and other family members. Other meeting places included the author's office. During the initial meeting, the rationale for the study, a description of procedures relative to completion of self-report instruments, and assurances regarding right to withdraw and confidentiality of information were given. When the participant(s) indicated a full understanding of the project, final written consent to participate was obtained (Appendix B-3). Subsequently, general demographic information and a brief diagnostic history of the child was obtained by structured interview. Self-report questionnaires were then introduced and explained in a specific order (Appendix B-4). Subsequent order of completion, however, was an individual choice. Time taken to complete the self-report instruments varied. For most parents, immediate completion was not convenient, thus a date of completion was agreed upon, typically within a week. Individual completion without collaboration was emphasised in two-parent families. Participants were encouraged to contact the author by telephone if difficulties were encountered or clarification of questions was required. Questionnaires were subsequently either mailed to the author, or collected from the family home by the author, depending on the parents' unique situations and what was convenient for them. Four parents required direct assistance with reading and marking their responses on the sheet, and the author complied, taking precautions against influencing participant responses. Such assistance occurred either at the initial meeting, or at a later mutually convenient appointed time. One family was very enthusiastic to participate because of services received by their son since immigration to Canada. Due to their limited facility with

the English language, however, they asked that their teenage daughter act as interpreter of the written material, and then transcribe their responses exactly as given. This was allowed.

Of the 50 families referred by Health Unit personnel as having indicated interest in the project and subsequently contacted by this author, 44 families consented to an initial interview. Of this number, 31 were two-parent families, and 13 were single-mother families. Nine fathers from the 31 two-parent families did not complete the questionnaires by the required deadline, or by several further extensions to this deadline. Reasons for non-participation included procrastination, lack of time due to other commitments, and/or lack of interest after further reflection. Thus, the final sample of 44 families was composed of 13 single mothers, 31 mothers with partners and 22 fathers.

Instruments

Consistent with the approach used in several previous studies (Bristol, 1987; Lavee et al., 1987; McCubbin, 1989; Reddon, 1989; Redington, 1992), a number of self-report rating scales were used to measure the dimensions of the model. This method was chosen because self-report measures can provide moderately valid and reliable indicators of constructs within the subjective realm of the individual. Also, self-report measures yield data that is amenable to statistical analyses, and the method is expedient with large numbers of individuals. Self-report measures, however, have a high level of reactivity (i.e., the subject can alter or distort the score

received), and thus there could be a risk of scores being yielded that are confounded with certain response set biases such as social desirability, acquiescence, extremity, evasiveness, and carelessness (Isaac & Michael, 1981).

The social desirability subscales incorporated in two of the instruments: Family Inventory of Resources for Management - FIRM (McCubbin & Comeau, 1991) and the General Scale of the Family Assessment Measure III - FAM III (Skinner, Steinhauer, & Santa Barbara, 1983) were administered to control for potential threats to validity due to this response set. The authors of the Life Orientation Test - LOT (Scheier & Carver, 1985) have also provided evidence of low correlation coefficients between the Marlowe Crown Social Desirability Scale and the LOT (Scheier, & Carver, 1985). Scoring reversal procedures and wording changes have also been incorporated into the various instruments by the test developers to control for potential threats due to the remaining response-sets. In the next section, a description of the instruments, their psychometric properties, and their use in the present study is provided.

The Pile-up dimension (AA Factor)

The Family Stressors Index (McCubbin, 1991) and the Child Domain of the Parenting Stress Index (Abidin, 1986) were used to obtain an indication of the level of demands on the family in terms of life stressors and daily hassles in the parent-child system respectively.

The Family Stressors Index (FSI) is composed of 10 items and was used to

provide an indication of the number of normative life events and changes experienced during the previous 12 months, that could render the family vulnerable to the impact of subsequent stressors or negative change (McCubbin, 1991). The FSI was selected as a measure of pile-up of demands associated with stressful life events as opposed to other measures such as, for instance, the Life Stress Domain of the PSI (Abidin, 1986), or the Family Inventory of Life Events (McCubbin, Patterson, & Wilson, 1980) because the FSI was specifically developed to assess the pile-up dimension. Moreover, the items on the FSI seemed less intrusive and more normative in nature than other instruments. An additional benefit for the respondent was the brevity of the instrument.

Items for the FSI were derived from the Family Inventory of Life Events - FILE (McCubbin et al. 1980). Respondents indicated whether the life event depicted by each item occurred to their family within the previous 12 months. A score was obtained for each item. All scores were subsequently summed and divided by 10. These derived scores were then be examined in the context of the family life cycle stage data provided by the authors. In terms of psychometric properties, a validity coefficient of .60 relative to the original FILE was reported by McCubbin (1991). Normative data was based on 1000 families from the United States who participated in a survey of family strengths. Although additional information specifically for the FSI was not available, the psychometric properties of the FIlE from which it was derived, appeared to be reasonably strong. Overall scale reliability for the F.I.L.E. was reported by McCubbin & Patterson (1991) as .81. Subscale reliabilities range

from .30 to .73. Evidence of construct, concurrent, and predictive validity for the F.I.L.E. was also provided in the manual.

The Parenting Stress Index (PSI) was used to measure perceived stress in the parent-child system. It is composed of 101 items and was originally developed for use with mothers, although Abidin (1986) indicated that either parent may complete the scale. The PSI yields individual subscale scores, domain scores, and an overall score. Respondents are required to rate each item on a five point Likert scale ranging from strongly agree (1) through to strongly disagree (5). Items generate three domain scores: the Child Domain, the Parent Domain, and an optional Life Stress Domain. Consistent with Redington's (1992) study of rural parents in Alberta, only the Child Domain was utilized in the current study to provide an indication of the pile-up of demands relative to the parent-child system. The Parent Domain appeared to assess factors other than pile-up of demands, for example, parent functioning and adaptation, parental perception, which could result in a confounding effect in the subsequent analyses (Redington, 1992).

The 50 items that constitute the Child Domain were used to generate six subscale scores which evaluated the adaptability, the acceptability, the demandingness, the mood, and the distractibility/hyperactivity of the child, as perceived by the responding parent, as well as the extent to which the child was perceived as reinforcing the parent. According to Abidin (1986), the construction of the PSI began with an extensive review of the stress literature combined with the author's clinical experience. A pilot test and a variety of field tests ensued. In terms

of content validity, test items were developed following a general review of relevant research in the areas of infant development, parent-child interaction, attachment, child abuse and neglect, child psychopathology, childbearing practice, and stress. Overall scale reliability was reported as .95. The alpha reliability coefficient for the Child Domain was .89. In terms of construct validity, evidence has been found in significant correlations between the Child Domain of the PSI and the Child Behaviour Problem Checklist (Quay & Peterson 1979). Evidence of test-retest reliabilities was presented by the author, with coefficients ranging from .96 for a one-to-three month period, and .65 for a one year interval. Normative data and guidelines for clinical interpretation of scores were based on a sample of 534 mothers from the United States. Limited normative data for fathers (N = 100) was provided, but Abidin (1986) suggested that fathers tended to earn significantly lower mean scores (Mean = 92.9) than mothers (Mean = 98.4).

Personal and Family Resources (BB Factor) and Community Resources (BBB Factor).

The Family Inventory of Resources for Management - FIRM (McCubbin & Comeau, 1991) was used to measure the BB Factor, the personal and family resources dimension of the model, that is, those resources and strengths that are available to the family for meeting various demands. The resources may be tangible (such as money), or intangible (such as innate intelligence, educational level and experience, personality traits, or locus of control). The FIRM consists of 98 items

which are rated by respondents in terms of how well the description applies to their family situation. Ratings range from 0 (not at all) through to 3 (very well). Four subscales are generated from item responses, namely, Family Strengths I: Esteem and Communication, Family Strengths II: Mastery and Health, Extended Family Social Support, and Financial Well-Being. The Social Desirability subscale of the FIRM and Sources of Financial Resources were recently added to the instrument. In order to be consistent with Redington's (1992) study, the Sources of Financial Resources subscale was not used in the present study because financial information was gathered in the initial interview and to collect further information in this respect would be redundant. With respect to psychometric properties, scale development was based upon an extensive review of the literature relative to personal resources, family resources, and social supports. Factor analysis was employed. Evidence of concurrent reliability was based on significant correlations between the FIRM and the Family Environment Scales (Moos, 1974). Internal reliability of the subscales respectively were reported as .85, .85, .62, and .85. Test-retest scores were not available. Normative data was based on a sample of 322 families of children with cerebral palsy or myelomeningocele from the United States.

The Social Support Inventory - SSI (McCubbin, Patterson, Cook, & Rosman, 1983) was used as a measure of the BBB Factor, namely, community resources or social support. Social support might be defined as relationships involving a qualitative exchange of communications in an atmosphere of trust. This is to be distinguished from social network which means all the people one has contact with

and from whom one can potentially obtain support. The SSI was developed for use in assessing the social support of parents at any stage of parenting as well as individuals in general. It was designed to capture the type, source, and intensity of the support received by the individual (Grochowski & McCubbin, 1991). Types of social support examined were: emotional, esteem, network, appraisal, and altruistic support. Sources of social support included spouse/partner, children, relatives, friends, co-workers, church/synagogue support, spiritual beliefs, community or neighbourhood groups, professionals or service providers, special groups, and books, television, radio and other media. Respondents were required to evaluate the amount of support received from these sources on a 3 point scale (1 = no, 2 = yes, 3 = yes, a lot). Scores were summed to provide an indication of overall support. Information provided regarding the psychometric properties of the SSI was quite limited. The test manual reported that construct validity was assessed and supported by a systematic literature review and interviews. Test-retest reliability was reported at .81. Normative data was not available.

Situational Appraisals (CC Factor) and Global Appraisals (CCC Factor)

The Life Orientation Test - LOT (Scheier & Carver, 1985) was chosen to reflect the CC dimension of the model. The LOT was developed by Scheier and Carver (1985) for the purposes of measuring dispositional optimism, defined as the generalized expectations of the occurrence of good outcomes in one's life. Such outcome expectancies are considered to be stable over time, and thus function as

mediators of individual behaviour in response to event. This instrument provides information about the typical manner in which individuals appraise daily events, and thus respondents' scores provide a basis from which inferences can be made regarding families' situational appraisals. Development of the LOT was influenced by the lack of assessments which could measure dispositional optimism without the confounding effects of other related variables such as morale, meaningfulness, well-being, and causal attribution (Scheier & Carver, 1985). The LOT is composed of eight items, four of which are keyed in a positive direction, and four of which are keyed in a negative direction. Furthermore, there are also four filler items included to disguise the underlying purpose of the test. Respondents in the current study were required to indicate the extent to which they agreed or disagreed with each of the items using a four point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree). The construct validity of the LOT was supported by a factor analysis using a normative sample of 624 undergraduate men and women from the United States. Evidence of convergent and discriminant validity was reported by the authors. Internal consistency (Chronbach's alpha) for the entire scale was reported as .76. Test-retest reliability over a 4 week period was reported as .76.

Two subscales from the Family Crisis Oriented Personal Evaluation Scales - FCOPES (McCubbin, Olson, & Larson) was chosen to reflect the CCC dimension of the model. The FCOPES was designed by McCubbin et al., (1991) to identify problem-solving and behavioral strategies utilized by families in difficult or problematic situations. Items on the FCOPES were generated from a review of the

literature related to coping theory and research. There are a total of 30 items from which five scales are generated, namely, acquiring social support, reframing, seeking social support, mobilizing the family to acquire and accept help, and finally, passive appraisals. Consistent with Redington's (1992) study, the subscales reflecting appraisals were utilized in the present study. Items were rated on a five point Likert scale ranging from strongly disagree (1) to strongly agree (5). Scale development was based on a review of the literature, pilot tests, and factor analyses. The overall alpha reliabilities reported for the Reframing and Passive Appraisals subscales were .82 and .63 respectively. Test-retest coefficients for the two subscales, reported for a sample of 116 individuals over a 4 week period were .61 and .75 respectively. Normative data was based upon a sample of 2740 husbands, wives, and adolescents from the United States.

Redington (1992) cautioned that operationalization of the two appraisal constructs, situational and global, could pose a number of difficulties given that they are within the subjective realm of the respondent. The implied expectation that a single numerical value can adequately represent the myriad of factors that make up the family's perceptions could be unrealistic (Wikler, 1986). Despite these limitations, two groups of researchers have used the Passive Appraisals and Reframing subscales of the FCOPES to represent the C factor in the adjustment phase of the McCubbin model (Lavee et al., 1987; Orr et al., 1991). Lavee and his colleagues (1987) however, used selected items of the original FCOPES to represent the CCC factor. This latter use appeared to be the most consistent with the

construct definitions presented by McCubbin and McCubbin (1991).

Family problem-solving and coping behaviours (PSC Factor)

The Coping Health Inventory For Parents - CHIP (McCubbin & Thompson, 1991) was used to examine the PSC Factor, that is, problem-solving and coping behaviours utilized to meet various demands. The function of coping is to restore or maintain the balance between demands and resources. The CHIP was developed to assess parents' perceptions of behaviours they are currently using to manage family life when they have a seriously ill or chronically ill child (McCubbin & Thompson, 1991). The instrument consists of 45 items categorized into three subscales of coping patterns. Coping Pattern I refers to efforts to maintain family integration, cooperation, and an optimistic definition of the situation. Coping Pattern II refers to efforts to maintain social support, to enhance self esteem, and to handle psychological tensions and pressures. Coping Pattern III refers to behaviours to improve parent's relationships with health care professionals and other parents of chronically ill children. These behaviours include developing more knowledge and understanding of the illness, and mastering any home care treatments and prescribed medical regimens (McCubbin & Thompson, 1991). Items are rated in terms of the perceived helpfulness for the family of the particular strategy. Ratings range from 0 (not helpful) to 3 (extremely helpful). Evidence of construct validity was provided through factor analyses and discriminant analyses between high and low conflict families who had a child with cerebral palsy. Concurrent validity studies were

conducted using the Family Environment Scale (Moos, 1974). Widespread use of the CHIP was cited as further evidence of the instrument's validity. McCubbin (1991) reported internal reliability coefficients for coping patterns I and II as .79, and internal reliability for coping pattern III as .71. Test-retest reliability coefficients were not provided. Normative data was based on a sample of 308 families of chronically ill children in the United States.

Family Adaptive Functioning (XX Factor).

The Family Assessment Measure III - FAM III (Skinner et al., 1984) was used as a measure of the XX Factor, the level of family adaptation and/or the family's transition back into a crisis situation. The family adaptation dimension refers to the outcome of reorganization and restructuring of the family system in order to restore some level of functional stability and/or to improve the general level of family satisfaction. The FAM III is a self-report instrument that provides quantitative indices of family strengths and weaknesses. It consists of three primary scales: the General Scale, the Dyadic Relationship Scale, and the Self Rating Scale. In order to be consistent with Redington's (1992) study, only the General Scale, composed of 50 items, was used for the purposes of the present study. Families' responses to the 50 items were categorized into seven dimensions related to family functioning, namely, task accomplishment, role performance, communication, affective expression, affective involvement, control, and values and norms. Two additional dimensions, namely, social desirability and defensiveness were included as validity subscales.

Respondents rated items on a four point Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree).

Scores on the FAM III profile were normalized such that each total scale and subscale had a mean of 50 with a standard deviation of 10. The authors stated that the majority of scores should fall between 40 and 60. Scores outside of this range could indicate either very healthy family functioning (i.e. below 40) or disturbance in family functioning (i.e. above 60) relative to the normative sample. Skinner et al. (1984) suggested that the more the social desirability and defensiveness scales exceed 50, the more an investigator should suspect the validity of the scores on the other scales.

The FAM III was developed according to a construct validation paradigm. This strategy involved an "active interplay between specification of the theoretical model of family functioning and construction of an instrument to measure concepts of the model" (Skinner et al., 1983). In terms of construct validity, a comparison of the FAM III scales was done with expert clinical ratings and behavioral observations. Predictive validity of the FAM III was determined by evaluation of the prognostic value of the FAM III in terms of treatment outcomes. Concurrent validity was determined through examination of the correlation of the FAM III with other family assessment instruments. Clinical validity was determined by an investigation of perceived relevance of the profiles to family therapists. The reliability of the General Scale was reported as being .95 for adults. Subscale coefficients for the General Scale ranged from .60 to .87. Normative data was based upon a sample of

372 "typical" families that were tested at various Canadian health and social service settings.

Data Analysis

Prior to analyses of the data, completed questionnaires were visually inspected to ensure that substantial amounts of data were not missing (i.e. > 2 items per subscale on more than two measures). Where possible, any respondent who omitted substantial numbers of responses was contacted by telephone, and responses to the questions were obtained verbally. When it was not possible to contact the respondent, missing data was handled by computing mean scores on the subscales. One father did not complete the LOT and thus was excluded from those analyses requiring these data.

Following scrutiny of returned questionnaires, completed instruments for 29 participants were marked by hand as a validity check for subsequent computer calculations. Next, means and standard deviations for all questionnaire data were computed. Comparisons of the data from the present study with normative data, where available, were done. Equality of means on all instruments between mothers and fathers, between couples, between married mothers and single mothers, and between urban parents and rural parents were evaluated for statistical significance using independent t-tests of means.

Appropriate application of the t-distribution to evaluate the equality of means requires that three assumptions be met concerning the populations to be compared.

First, individual observations should be independent. Second, scores within the two populations should be normally distributed. Finally, the two population variances should be equal (Glass & Hopkins, 1984). In the present study, the observations were treated as independent because it was assumed that the parents, as requested, completed the self-report measures independently. It is possible, however, that some degree of relationship between observations existed, given that parents with partners were reporting on the same child. Moderate departures from the above mentioned assumptions are generally considered to have negligible effects on the validity of both Type 1 and Type 2 error calculations when the tests are nondirectional and when the sample sizes increase above 20 or 30 cases. One noteworthy exception occurs, however, when the variance of the populations are substantially unequal coupled with substantially unequal sample sizes (as in the comparison of married mothers and single mothers). Evaluation of the homogeneity of variances for the statistical tests computed with the SPSS-X program were not required because pooled and separate variances were calculated within the program and were used accordingly. The F value calculated by SPSS-X indicated whether or not the sample variances were similar - the larger the number the more dissimilar the sample variances (Norusis, 1986).

The large number of t-tests computed in the analyses in this study was a concern in that the probability of committing Type 1 errors could increase. Thus, the significance levels for the independent t-tests of the means were set at $p < .01$, indicating that there is one chance in 100 that a Type 1 error will be made.

Although the design of the current research involved two groups and several dependent variables, a multivariate analysis using Hotelling's T was not chosen for the between-groups comparisons due to the relatively small sizes of the subgroups being compared. Many researchers recommend that the number of subjects in each group be equal to 10 times the number of dependent variables examined.

In the next phase of analysis, correlations and scatterplots were used to examine the patterns of relationships among demographic data. Scatterplots were used to determine any substantial degree of nonlinearity. Bivariate correlations depicted the relationship between two variables with the influence of all other variables included (Glass & Smith, 1987). Thus, correlation coefficients provided an index of the association between pairs of variables without indicating how much of the shared variance was due to the influence of a third variable.

In the last phase of analysis, multiple regression analyses were done to predict family adaptation (as reflected in FAM III scores) from the measures of pile-up of demands (AA Factor), personal and family resources (BB Factor), community resources (BBB Factor), situational appraisals (CC Factor), global appraisals (CCC Factor), and problem-solving and coping (PSC Factor). Three separate regression analyses were done using a) the urban data in the current study (n = 66), b) the rural data from Redington's (1992) study (n = 71), and c) the combined urban and rural data (n = 137).

Overall test scores on each measure produced a total of 11 variables that were entered into the first equation. The independent variables were mean scores on: the

FSI, the Child Domain of the PSI, the FIRM (total), the SSI (total), Reframing and Passive Appraisals from the FCOPES, the LOT, and finally Coping Patterns I, II, and III from the CHIP. The dependent variable was the mean score on the FAM III (total), the measure of family adaptation.

Statistical analyses were computed using stepwise multiple regression method of the SPSS-X program. The purpose of the multiple regression was to study relationships between a single dependent variable (FAM III scores) and several independent variables (all other measures relative to the other six critical dimensions of the model plus selected demographic variables) to determine how much each variable contributed to the model.

CHAPTER V

RESULTS

Introduction

The results of the current investigation are presented in this chapter. Families are briefly described in terms of the demographic information obtained in the initial interview. Following this description, data relative to the analyses undertaken to achieve the objectives of this study are presented.

Description of Participants

Forty-four families residing in a large city in north central Alberta participated in the present study. In terms of family composition, 31 of the families were intact, with both natural parents living in the home, either married or common law. The primary caretaker in all instances was the mother. All mothers except 2 were biological mothers. One never-married mother had adopted her child, specifically requesting a child with special needs (her third). A two-parent family had also adopted their special needs child by choice. Thirteen of the families were single mother families, that is, they were either divorced, or never married, or widowed. No single families in the current study were headed by fathers. This does not correspond with local statistics which indicate that of the nearly 30,000 lone-parent

families in the city of Edmonton in 1991, 16% were headed by fathers. The majority however, were headed by females.

Parents

The ages of the parents in the present study ranged from 20 years to 49 years. The mean age for the mothers was 31 years. The mean age for the fathers was 34 years. The majority of mothers in the study reported having a minimum of high school level education: 68% (n=30) had obtained a high school diploma, 20% (n=9) had some college level education, and 16% (n=7) had obtained university degrees. A number of mothers, however, reported educational levels below the high school level: 11% (n=5) had completed some high school education, 16% (n=7) had no more than junior high school education, and 4% (n=2) had completed less than 7 years of public education. The majority of fathers had also completed a minimum of high school level education: 26% (n=8) had graduated from high school and/or trade school; 32% (n=10) had completed some college education; 19% (n=6) had graduated from University, and 1 father had graduated from a graduate level program. A small number of fathers, however, reported educational levels below the high school level: 6% (n=2) had completed some high school education, 10% (n=3) had completed no more than junior high school, and one father had less than 7 years of formal education. Parental demographic data across locations is provided in Appendix C-1 to Appendix C-4.

In terms of occupation, 86% (n=38) of the 44 mothers were full time care-givers. Two mothers described themselves as being "unemployed" which suggests

perhaps a desire to be employed. Of the remaining four mothers, each was employed in a different category as follows: semi-skilled, clerical, administrative/small business and finally manager/medium business (Hollingshead, 1975). Of the 31 fathers, only 6% (n=2) were unemployed. The majority were semiskilled workers (n=8; 28%) and skilled workers (n=10; 32%).

The gross family income of the 44 families in the current study ranged from under $10,000 per annum to the $70,000 - $100,000 range. The mean family income was between $20,000 and $29,000. Fourteen of the families (31.8%) reported gross family income in the $11, 000 to $19,000 range. Of these, 10 were single-mothers and 4 were mothers with partners. Furthermore, the gross family income of 2 single-mothers in this study was reported at less than $10,000. According to Lees (1994), the poverty line for one adult and one child in a Canadian city of 500,000 or more is $20,536. Thus it would appear that most of the single-mothers in this study (12 out of 13, or 92%) were functioning below the poverty level, which could contribute to the pile up of stress in their lives, and simultaneously reduce family resources available to access. No single-mother in this study reported a gross family income above the $20,000 to $29,000 range, whereas 20 mothers with partners (45%) reported incomes above this level.

Children

The ages of the children in the study ranged from 2 months to 66 months, the mean age being 35 months. Although a formal diagnosis for five of the children

(11%) was not available, diagnoses for the remaining children included a wide range of conditions. When diagnoses were categorised into broad categories, fourteen children presented with developmental disabilities (32%), twelve children (27%) demonstrated physical handicaps and or impaired health, eleven children (25%) exhibited communication delays/disorders, two children (4%) suffered sensory handicaps, and finally, five children (11%) did not have a diagnosis (Appendix C-5). In terms of more specific diagnoses, the majority of the children in this study (25% or n=11) were identified as having speech/language delay or disorder. Other diagnoses included: developmental delay (n=4), cerebral palsy (n=3), Down Syndrome (n=3), sensory impairment (n=2) and multiple medical condition (n=2). The following diagnoses were given to other individual children: cleft lip/palate, physical anomalies, heart problems, brain injury, Pervasive Developmental Disorder, multiple physical handicap, neurological impairment, spinal cord injury, dysmorphic features, seizures, Tuberous Sclerosis, Town/Brocke Syndrome, hypotonia and developmental delay, and global developmental delay with hypotonia and visual impairment (Appendix C-6).

Regarding diagnostic procedures, most of the children, namely 45% (n=20) had undergone assessment and diagnosis, likely as a result of a multi- or interdisciplinary assessment. Thirteen children (29%) presented with a formal diagnosis likely given by a medical doctor. Six children were diagnosed by means of clinical judgement and three diagnoses were by parent report/observation. The mean age of diagnosis was 18 months, the range was birth to 48 months. Twelve of

the children (27%) were diagnosed at birth. Eight of the children (18%) were diagnosed between birth and 1 year. Seven of the children (16%) received a diagnosis between the ages of 1 and 2 years. Ten of the children (23%) received a diagnosis between the ages of 2 and 3 years. Finally, 6 of the children (14%) were diagnosed between the ages of 3 and 4 years.

In terms of related areas of need for intervention purposes (Appendix C-5), for 15 of the children in this study (34%), speech language concerns, specifically, articulation, were most often reported. The second area of need reported for the children in this study was communication. Despite the large proportion of speech/language diagnoses (n=11) in this sample, only one child was receiving treatment/therapy. Overall, for all conditions, 16 (36%) of the children were not in any program, some obviously because they are currently too young, and others because they are still awaiting assessment and or diagnosis. On the other hand, 28 children (64%) were receiving some form of early intervention. In terms of parent involvement in early intervention with their child, 27 of the parents (61%) were not involved on a daily or weekly basis. Twelve parents, however (27%) reported on-going involvement in the special care of their child on a daily basis.

The majority of the families in the current study (n=35; 79%) reported having additional children in the home. Nineteen families (44%) reported having 1 other child, 11 families (26%) reported having 2 other children, and 5 families (12%) reported having three or more other children in the home. Approximately 17% (n=7) of the families reported having a second child in the home with special needs.

Diagnoses for these children included attention deficit disorder, hydrocephaly, cerebral palsy, speech/language delay, and failure to thrive.

The majority of the families in the current study could be categorised in the early stages of the Family Life Cycle in that 23 families (52%) had another preschool child aged 0 - 5 years. Many families (n=27; 61%) did not have children in the 6 - 12 year range. Most families (91%) did not have children older than 12 years.

The above demographic data is tabulated and located in Appendix C.

Research Question 1

What is the relationship between demographic variables and measures of family stress and family functioning in the urban sample of parents raising preschool children with disabilities?

Correlational analyses were conducted on demographic data and the test score data relative to each dimension of the model (Table 1). The significance level for the correlational analyses was set at $p < .01$. The demographic variables considered were: age of the mother; age of the father; age of the child; gross family income; marital status; years married at age of diagnosis; education of the mother; education of the father; occupation of the mother; occupation of the father; daily and weekly time of child and/or parent involvement in an intervention or treatment program; number of other children in the family and the presence of other children in the family with special needs.

Table 1 Correlations between demographic variables and test scores of urban families (n=44)

Demographic Variables	FSI	PSI	FIRM	SSI	LOT	FCOPES REFRAME	FCOPES P.APPR.	CHIP	FAM III
Age of mother	---	---	---	---	---	---	.38**	---	---
Age of father	---	---	.48***	---	---	---	---	---	---
Age of child	---	---	---	---	---	---	---	---	---
Gross family income	---	---	.34*	---	---	---	.38**	---	---
Marital status	---	---	---	---	---	---	---	---	---
Years married at diagnosis	---	---	.43**	---	---	---	---	---	---
Education of mother	---	---	.43**	---	.45**	---	.42**	---	---
Education of father	---	---	.37**	---	---	---	---	---	---
Occupation of mother	---	---	---	---	---	---	---	---	---
Occupation of father	---	---	.41**	---	---	---	---	---	---
Parent hours per day	---	---	---	.35*	---	---	---	---	---
Parent days per week	---	---	---	.35*	---	---	---	---	---

Note. All correlations p<.05 were omitted *p<.025; **p<.01; ***p <.001

Results indicated moderate, but significant positive associations between overall scores on the measure of personal and family strengths (FIRM) and age of the father (r = .48), occupation of the father (r = .41), education of the mother (r = .43), education of the father (r = .37) and years married when the child's diagnosis was determined (r = .43). Furthermore, there was a low positive association between gross family income and the measure of personal and family strengths (FIRM) that approached significance (r = .34).

There was evidence of a moderate but significant positive correlation between the measure of dispositional optimism (LOT) and level of education of the mother (r = .45). Level of education of the mother was also associated in a moderate but significant, positive way (r = .42) with the measure of passive appraisals on the FCOPES, as was age of the mother (r = .38) and also gross family income (r = .38).

There were also evidence of correlations that approached significance (that is, $p < .025$). Overall scores on the measure of social support (SSI) were positively associated to a moderate degree with parent involvement in the child's program or treatment in terms of number of hours involvement each day (r = .35) as well as number of days involvement each week (r = .35).

Finally, there was no evidence of significant associations between the demographic variables considered and the Family Stressors Index, the Parenting Stress Index, and the Family Assessment Measure III, reflecting the AA, the PSC and the XX dimensions of the model respectively.

Research Question 2

How do the responses of the urban sample of parents raising preschool children with disabilities compare with the normative sample?

With respect to the AA dimension of the model, on the FSI normative mean scores were available only for the total sample (N = 1000), not for separate male and female groups. Overall, the urban parents reported a higher mean score in terms of recollections and perceptions of major life stressors experienced during the previous year than the normative group (Table 2). Although independent-tests of means approached significance ($p < .05$), results suggested that the urban parents were not shouldering the after-effects of a greater number of major life stressors than would be considered typical, that may serve to intensify the pile-up of demands in the family system.

In terms of scores on the PSI (Table 2) the mean scores of the urban parents were consistently much higher than those of the normative parents in all subdomains, and also in the overall Child Domain score. More than 50% of the urban sample, (specifically 23 out of 44 mothers and 8 out of 22 fathers) achieved overall scores that were above the upper limits determined by Abidin (1986) to be clinically significant. Such high scores were said by Abidin (1986) to be associated with children who display qualities that make it difficult for parents to fulfil their parenting roles. Independent t-tests of the means indicated differences between urban mothers and normative mothers on the overall Child Domain score to be statistically significant ($p < .001$). Likewise, for the fathers, differences between the urban sample and the normative sample were statistically significant ($p < .001$).

Table 2

Urban and normative comparisons: summary table

		Urban Study			Normative Data			Urban/Normative Differences	
Instrument		n	M	SD	n	M	SD	t value	p value
FSI	(T)	66	12.96	7.20	1,000	11.00	8.00	2.13	<.05
PSI: Child Domain	(m)	44	124.02	25.97	534	98.40	19.20	6.40	<.001
	(f)	22	118.55	23.98	100	92.90	11.90	4.88	<.001
FIRM Total	(T)	66	100.18	22.87	322	110.00	18.00	-3.28	<.01
LOT	(m)	43	17.60	6.89	624	21.41	5.22	-3.66	<.01
	(f)	21	20.19	4.62		21.03	4.56	0.82	NS
FCOPES	(m)	43	29.58	6.23	2,740	30.42	4.86	-0.88	NS
(Reframing)	(f)	22	29.86	4.06		30.42	4.91	0.64	NS
FCOPES	(m)	43	14.60	3.72	2,740	8.20	3.06	11.22	<.001
(Passive Appraisals	(f)	22	15.45	3.11		8.50	2.95	10.44	<.001
CHIP I	(m)	44	36.98	9.22	308	40.00	15.00	-1.85	NS
	(f)	22	38.14	6.94		36.00	20.00	1.15	NS
CHIP II	(m)	44	29.48	9.48	308	28.00	12.00	0.93	NS
	(f)	22	27.36	6.92		25.00	15.00	1.38	NS
CHIP III	(m)	44	15.27	4.30	308	15.00	7.00	0.35	NS
	(f)	22	13.50	4.22		12.00	8.00	1.59	NS
FAM III	(T)	66	53.57	8.94	372	50.00	10.00	2.93	<.01

Note. Tables of subscale scores for each instrument are located in Appendix D
(m = mothers; (f) = fathers; (T) = total

Significant differences were also obtained in the various subdomains, specifically, child adaptability/plasticity ($p < .001$ for both mothers and fathers), child acceptability to the parent ($p < .001$ for both mothers and fathers), and child demandingness/degree of bother ($p < .001$ for both mothers and fathers). Both mothers and fathers in the current study perceived the child as having higher levels of distractibility/activity than did the normative mothers and fathers ($p < .01$ and $p < .001$ respectively). In terms of the experience of the child as a source of reinforcement, both parents achieved the same mean score. For the mothers, this was significantly higher than the normative mothers ($p < .01$), yet for the fathers, the difference when compared to the normative fathers was not significant. The mean score regarding child mood was higher for the mothers in the urban sample ($p < .001$) but was not significantly different from the normative mean for the fathers.

On the FIRM, the measure of family strengths and resources (Table 2) independent t-tests of the means indicated that overall the urban parents reported significantly fewer resources than the normative group. Specifically, esteem and communication was significantly lower ($p < .01$), as was mastery and health ($p < .001$) and extended family support ($p < .001$). In terms of financial well-being, there appeared to be no significant difference between the urban parents and the normative group. One was neither better off nor worse off than the other.

Regarding the BBB dimension of the model, social support, normative data was not available for the Social Support Inventory.

On the LOT, the measure of situational appraisals (Table 2), independent t-

tests of the means indicated that when compared with the normative mothers, the urban mothers were significantly weaker in dispositional optimism ($p < .01$). There was no significant difference for fathers relative to their scores on the LOT compared with the men in the normative sample.

With reference to the CCC dimension of the model, global appraisals, scores on the reframing scale of the FCOPES (Table 2) indicated no significant difference between mothers and fathers in the urban sample and those in the normative sample. On the passive appraisals scale of the FCOPES, however, the means of the urban mothers and the urban fathers were considerably higher than those of the normative mothers and fathers. Independent t-tests of the means indicated significant strength for both the urban mothers and the urban fathers compared with the normative mothers and fathers ($p < .001$), regarding tendency to face difficult life situations based on a positive perception of ability to influence outcomes, as opposed to passive avoidance of issues.

With respect to the PSC dimension of the model, problem solving and coping, the urban mothers and fathers in the current study did not demonstrate significantly different amounts of coping on any of the three coping patterns generated by responses on the CHIP than the parents in the normative sample (Table 2).

Finally, in terms of the XX dimension of the model, the authors of the FAM III stated that the majority of standard scores obtained should fall within the 40 - 60 range. Scores outside of this range likely indicate either very healthy functioning (standard scores less than 40) or disturbance in family functioning (standard scores

above 60) relative to the normative group. The urban parents in the current study obtained a mean score within the 40-60 range (Table 2) which might indicate normal family functioning for this group. Independent t-tests of the means, however, revealed a significant difference when compared to the mean of 50 of the normative group ($p < .01$). Such a significantly higher mean score than the normative group might not necessarily indicate family dysfunction given that the mean score fell within the range considered normal. Furthermore, scrutiny of individual scores on the FAM III indicated 73% of the urban parents obtained overall scores within the normal range, between 40 and 60. Twenty three percent of the group obtained overall scores on the FAM III higher than 60 suggesting less than optimal family functioning. Of these, 6 were single mothers, 6 were married couples, 2 were fathers, and 1 was a married woman.

Perceptions of some aspects of family functioning were also different between the urban parents and the normative group. For example, independent t-tests of the means conducted on subscale scores on the FAM III indicated significant differences in terms of task accomplishment ($p < .01$), affective expression ($p < .01$), sense of control in the family ($p < .01$), and finally, role performance ($p < .001$). Although the urban parents demonstrated somewhat less strength in these subscales, findings might not imply disturbance or dysfunction in these areas given that the mean scores for these subscales were within the acceptable range that is, between 40 and 60.

It should be noted that the means of the two response style subscales (Social Desirability and Denial) were significantly lower than the means obtained by the

normative group ($p < .01$ and $p < .001$ respectively). The authors of the FAM III state that the more the Social Desirability and Defensiveness scores exceed 50, the more suspect are the responses on the other scales (Skinner et al. 1990). These authors are not specific about the meaning of scores that are significantly lower than 50, other than to state that scores below 40 do not guarantee the validity of the other scales on the FAM III. Urban data in the current study indicates that the majority of the sample (83%) obtained scores within the normal range on the Social Desirability scale, and the majority of the sample (77%) obtained scores within the normal range on the Denial subscale. The lowered Denial subscale seemed to be due to the effects of the scores of 4 outliers at the lower end of the scale. Nevertheless, the responses of the urban sample on the FAM III should perhaps be treated with caution because the means of the two response style subscales were significantly lower than the means of the normative group.

Research Question 3

> To what extent do the responses of the mothers and fathers in the sample of urban parents raising preschool children with disabilities differ?

On the FSI (Table 3) mothers obtained a higher mean score than fathers. Independent t-tests of the means, however, did not yield a statistically significant difference. Thus, in terms of major life stressors during the past year contributing to pile-up of demands in the family, mothers and fathers recollections and perceptions were not significantly greater for one than the other. Similar results were obtained when comparisons of couples were conducted (Appendix F-1).

Table 3

Mother and father comparisons: summary table

Instrument		Urban Study n	Range	M	SD	Mother/Father Differences t value	p value
FSI	(m)	44	0 - 32	13.53	7.85		
	(f)	22	0 - 21	11.81	5.68	-1.02	0.314
PSI:Child Domain	(m)	44	79 - 180	124.02	25.97		
	(f)	22	74 - 163	118.55	23.98	0.85	0.400
FIRM Total	(m)	44	44 - 136	98.61	24.66		
	(f)	22	64 - 139	103.32	18.94	0.86	0.395
SSI Total	(m)	44	66 - 153	103.64	19.40		
	(f)	22	78 - 152	109.67	20.11	1.14	0.260
LOT	(m)	43	1 - 28	17 60	6.89		
	(f)	21	13 - 28	20.19	4.62	1.78	0.081
FCOPES	(m)	43	10 - 38	29.58	6.23		
(Passive Appraisals)	(f)	22	21 - 36	29.86	4.06	0.22	0.827
FCOPES	(m)	43	7 - 20	14.60	3.72		
(Reframing)	(f)	22	9 - 20	15.45	3.11	0.97	0.335
CHIP I	(m)	44	18 - 56	36.98	9.22		
	(f)	22	24 - 50	38.14	6.94	0.57	0.571
CHIP II	(m)	44	9 - 53	29.48	9.48		
	(f)	22	8 - 40	27.36	6.92	-1.03	0.308
CHIP III	(m)	44	8 - 24	15.27	4.30		
	(f)	22	5 - 21	13.50	4.22	-1.60	0.117
FAM III	(m)	44	38 - 85	53.52	9.52		
	(f)	22	38 - 67	53.68	7.85	0.07	0.944

Note. Tables of subscale scores for each instrument are located in Appendix E
(m) = mothers; (f) = fathers

Likewise on the PSI (Table 3) the 44 mothers in the sample achieved a higher mean score overall than the 22 fathers in the sample in terms of perceived child characteristics contributing to overall stress in the parent-child system. Independent t-tests of means, however, indicated this difference was not statistically significant. Likewise, scrutiny of subtest scores within the child domain indicated no significant differences between mothers and fathers, despite the consistently higher mean scores obtained by the mothers. Similar findings were obtained when husband/wife pairs were selected from the total sample, and statistical analysis of differences between means obtained by mothers (n=22) and fathers (n=22) were conducted (Appendix F-2).

In terms of the buffering variables, mean scores of parents on the FIRM (Table 3) indicated a higher mean score for fathers regarding overall perception of total family strengths and resources. Independent t-tests of the means, however, suggested no significant differences between mothers and fathers or husband wife pairs on the FIRM (total) or any of its subscales. It appeared that both mothers and fathers had similar perceptions of family strengths relative to esteem and communication, to mastery and health, and to availability of extended family support. Similar findings were obtained relative to couples (Appendix F-3).

The SSI generated information regarding sources of social support (Table 3) and also types of social support (Appendix E-5). Although slightly lower, the overall score for mothers relative to sources of social support was not significantly different from that of the fathers. There were, however, variations in the some of the sources

of social support reported. Independent t-tests of the means indicated that in terms of support from spouse, mothers reported less support than fathers, and this score approached significance ($p < .05$). Regarding contact with professionals, mothers reported more social support from this source than did fathers, and this score approached significance ($p < .05$). Support from co-workers was the only source of social support that was statistically different between the urban parents in that the fathers reported significantly more support in this respect than mothers ($p < .001$), likely due to the fact that most mothers were not employed. These findings also held true when comparisons were made between mother and father partners (Appendix F-4).

Information on types of social support was also generated by the SSI (Table 3). Means of mothers and fathers in terms of emotional support, esteem support, network support, appraisal support, and altruistic support, were very similar. Independent t-tests of the means indicated no differences of statistical significance. This finding held true when comparisons were made between mother and father partners (Appendix F-5).

Results on the LOT, the measure of dispositional optimism (Table 3) revealed a higher mean score for the fathers than the mothers. The difference, though not significant according to statistical analysis, was greater between mothers and fathers as opposed to couples (Appendix F-6), suggesting that responses of single mothers might have deflated the mean score of all mothers.

With respect to the FCOPES (Table 3), the measure of global appraisals, on the reframing subscale the mean score of the mothers and the mean score of the fathers were similar, indicating an average tendency for both mothers and fathers to redefine difficult situations in a positive manner, to make them more manageable. Independent t-tests of the means indicated no significant differences between mothers and father, or couples (Appendix F-7) with respect to this tendency.

Likewise, statistical analyses of mean scores on the passive appraisal subscale of the FCOPES indicated no significant differences between mothers and fathers, or between mothers and father partners. Scores obtained for the mothers and the fathers exceeded normative data suggesting an average or above average tendency to actively, as opposed to passively, face difficulties based on a positive perception of the family's abilities to influence the outcomes.

Independent t-tests of the means on the CHIP (Table 3), the measure of problem solving and coping, yielded no significant differences between mothers and fathers on any of the three coping patterns generated by this instrument. Thus in terms of integration, cooperation and optimism, as well as support, esteem and stability, and also medical communication and consultation, neither parent seemed to be more adept or proficient than the other regarding coping skills reported. This finding also held true for the comparisons between couples (Appendix F-8).

Finally, in terms of family adaptation, independent t-tests of means on the FAM III (Table 3) did not yield any significant differences between the mean scores of the mothers in the sample compared with the mean scores of the fathers, either

overall or any of the individual subscales. This finding also held true for statistical analyses done on the mother-father couples (Appendix F-9), suggesting that perceptions of family functioning by mothers and fathers in the urban sample were similar.

Research Question 4

> To what extent do the responses of mothers with partners and mothers without partners in the sample of urban parents raising preschool children with disabilities differ?

On the FSI (Table 4) both mothers with partners and single mothers obtained similar mean scores, reflecting equivalence between groups in terms of major life stressors reported as occurring during the past year contributing to pile-up of demands in the family.

On the Child Domain of the PSI (Table 4) although the single mothers in the current study obtained a higher mean score overall than mothers with partners relative to stress in the parent child system, independent t-tests of the means did not indicated the difference was not significant. The subdomains of: acceptability of the child to the mother, child demandingness/degree of bother, child mood, child distractibility/activity, and the experience of the child as reinforcing, were not significantly more problematic for either the mothers with partners or the single mothers. The adaptability of the child, that is, the ability of the child to adjust to changes in his/her physical or social environment, however, was more problematic

Table 4

Married mother and single mother comparisons: summary table

Instrument		Urban Study n	M	SD	Married mother/single mother Differences t value	p value
FSI	(m)	31	13.39	7.32		
	(s)	13	13.88	9.30	-0.17	0.865
PSI: Child Domain	(m)	31	121.68	26.47		
	(s)	13	129.62	24.84	-0.95	0.352
FIRM Total	(m)	31	106.06	21.39		
	(s)	13	80.85	23.44	3.34	0.003
SSI Total	(m)	31	106.26	20.64		
	(s)	13	97.38	14.96	1.59	0.121
LOT	(m)	30	18.47	6.00		
	(s)	13	15.62	8.53	1.09	0.289
FCOPES	(m)	30	30.17	5.19		
(Passive Appraisals)	(s)	13	28.23	8.25	0.78	0.446
FCOPES	(m)	30	15.07	3.73		
(Reframing)	(s)	13	13.54	3.60	1.27	0.218
CHIP I	(m)	31	38.61	8.37		
	(s)	13	33.08	10.30	1.72	0.103
CHIP II	(m)	31	29.94	9.37		
	(s)	13	28.38	10.05	.0.48	0.639
CHIP III	(m)	31	15.45	4.50		
	(s)	13	14.85	3.96	0.44	0.660
FAM III	(m)	31	52.58	10.13		
	(s)	13	55.76	7.80	-1.12	0.270

Note. Tables of subscale scores for each instrument are located in Appendix G
(m) = married mothers; (s) = single mothers

for the single mothers and this difference approached significance ($p < .05$).

With respect to family strengths and resources, on the total FIRM score (Table 4) independent t-tests of means indicated significant difference ($p < .01$) suggesting that mothers with partners perceived more family strengths and resources to reduce or eliminate stress. Scrutiny of subscale scores indicated that significantly fewer resources relative to financial well-being ($p < .001$) and extended family support ($p < .01$) likely contributed to the more impoverished picture of family strengths and resources for single mothers.

On the SSI, (Table 4) independent t-tests of means did not indicate significant difference between the two groups of mothers in terms of overall availability of sources of social support as reflected by the total SSI mean score. There was, however, evidence of significantly less support for single mothers from spouse ($p < .01$), and from the church/synagogue ($p < .001$). Furthermore, in terms of types of social support, (Table 4), statistical analysis did not reveal any significant differences between the responses of the single mothers and the married mothers.

On the LOT, the measure of situation appraisals (Table 4), although there was a difference between the mean scores of the mothers with partners and the single mothers (with the former being greater than the latter) independent t-tests of means did not indicate significant difference. Thus, with respect to dispositional optimism, both groups of mothers appeared to be equivalent.

Furthermore, on the Reframing subscale of the FCOPES, the measure of global appraisals (Table 4), there was no significant difference between the two

groups in terms of tendency to redefine difficult situations in a positive manner, to make them more manageable.

Likewise, statistical analyses of mean scores on the Passive Appraisals subscale of the FCOPES indicated no significant differences between the groups. Mean scores for both groups were above the normative mean, suggesting an average to above average tendency to actively (as opposed to passively) face difficulties based on a positive perception of the family's abilities to influence the outcomes.

On the CHIP (Table 4), the measure of problem-solving and coping, even though the mean scores of single mothers on each of the three subscales were higher than those obtained by the mothers with partners, independent t-tests of the means did not yield any significant differences between the groups.

Thus, mother efforts in terms of maintaining integration, cooperation and optimism in the family; maintaining social support, self-worth and psychological stability in the family; understanding the health care situation through communication with other parents and consultation with health care personnel, appeared to be equivalent, regardless of marital status.

Finally, on the FAM III (Table 4), the measure of family adaptation, independent t-tests of the means did not yield any significant differences between the scores of the mothers with partners and the single mothers on the overall FAM III scores or on any of the individual subscale scores. Thus, both groups of mothers of children with special needs, regardless of marital status, appeared to perceive family functioning as reasonably healthy and non-problematic.

Research Question 5

> To what extent do the responses of the parents in the current study and subjects in Redington's (1992) study of rural parents raising preschool children with disabilities differ?

Independent t-tests of the means considered comparisons between urban mothers and rural mothers, urban fathers and rural fathers, and total urban parents and total rural parents. On the FSI (Table 5) there was no evidence of significant difference between urban parents and rural parents in terms of ratings of major life stressors during the past year.

On the PSI (Table 5) the mean scores of the urban parents were generally higher than those of the rural parents on both the subscales and the overall score reflecting child characteristics contributing to stress in the parent-child system. Independent t-tests of the means indicated that the difference in the overall Child Domain score was statistically significant ($p<.01$). The areas of child adaptability, child acceptability, and child demandingness/degree of bother, approached significance ($p<.05$). Thus, the urban parents appeared to shouldering more stress than the rural parents, perhaps due to their perceptions of problems with child adaptability, child acceptability to the parent, and child demandingness/degree of bother.

With respect to the buffering variables, on the FIRM (Table 5), rural parents, as a total group and when separated into mothers and fathers, scored much higher in their ratings of overall family strengths to bring to the stressful situation than urban parents. This difference, however, was not statistically significant.

Table 5

Urban and rural comparisons: summary table

Instrument		Urban Study n	Urban Study M	Urban Study SD	Rural Study n	Rural Study M	Rural Study SD	Urban/Rural Differences t value	Urban/Rural Differences p value
FSI	(m)	44	13.53	7.85	44	12.60	8.48	-0.53	0.595
	(f)	22	11.81	5.68	27	12.09	9.22	0.13	0.897
	(T)	66	12.96	7.20	71	12.41	8.71	-0.40	0.686
PSI: Child Domain	(m)	44	124.02	25.97	44	113.93	23.18	-1.92	0.058
	(f)	22	118.55	23.98	27	108.81	25.66	-1.37	0.178
	(T)	66	122.20	25.28	71	111.99	24.10	-2.42	0.014
FIRM Total	(m)	44	98.61	24.66	44	105.54	22.19	1.39	0.169
	(f)	22	103.32	18.94	27	110.42	22.74	1.18	0.244
	(T)	66	100.18	22.87	71	107.36	22.36	1.85	0.067
SSI Total	(m)	44	103.64	19.40	44	109.02	18.31	1.32	0.189
	(f)	22	109.67	20.11	27	114.46	18.08	0.85	0.400
	(T)	66	105.58	19.68	71	111.10	18.28	1.67	0.097
LOT	(m)	43	17 60	6.89	44	18.80	5.27	0.90	0.369
	(f)	21	20.19	4.62	26	20.00	5.08	-0.13	0.894
	(T)	64	18.45	6.32	71	19.24	5.19	0.79	0.433
FCOPES (Passive Appraisals)	(m)	43	29.58	6.23	43	30.86	5.05	1.05	0.295
	(f)	22	29.86	4.06	27	31.19	4.88	1.03	0.306
	(T)	65	29.68	5.56	70	30.98	4.95	1.44	0.151
FCOPES (Reframing)	(m)	43	14.60	3.72	43	15.16	3.40	0.73	0.470
	(f)	22	15.45	3.11	27	15.41	3.39	-0.05	0.960
	(T)	65	14.89	3.52	70	15.25	3.38	0.61	0.543
CHIP I	(m)	44	36.98	9.22	44	41.45	8.46	2.37	0.020
	(f)	22	38.14	6.94	27	41.54	6.80	1.68	0.100
	(T)	66	37.36	8.49	71	41.49	7.86	2.91	0.004
CHIP II	(m)	44	29.48	9.48	44	31.80	8.94	1.18	0.241
	(f)	22	27.36	6.92	27	33.24	8.70	2.58	0.013
	(T)	66	28.77	8.72	71	32.32	8.81	2.35	0.020
CHIP III	(m)	44	15.27	4.30	44	16.98	4.04	1.91	0.059
	(f)	22	13.50	4.22	27	14.12	4.39	0.49	0.624
	(T)	66	14.68	4.33	71	15.94	4.37	1.68	0.094
FAM III	(m)	44	53.52	9.52	44	51.37	7.75	-1.16	0.250
	(f)	22	53.68	7.85	27	51.44	7.52	-1.01	0.317
	(T)	66	53.57	8.94	71	51.40	7.61	-1.53	0.129

Note. Tables of subscale scores for each instrument are located in Appendix H
(m) = mothers; (f) = fathers; (T) = total

Likewise, no significant differences were found in any of the subscale scores.

Out of the 12 sources of social support measured by the SSI (Table 5), statistical analyses revealed that there were significant differences in six sources when urban and rural parents were compared. Most differences indicated more reported support for the rural parents. The rural parents reported significantly more support from a spouse than the urban group ($p < .01$), likely due to the responses of the urban mothers, which were significantly lower than those of the rural mothers ($p < .01$), and which in turn could have been due to the influence of the single mothers in the urban sample. Support from children was found to be significantly stronger for the rural parents as a group ($p < .01$) perhaps due to the influence of the rural fathers who demonstrated more positive responses in this respect, that approached significance, than the urban fathers. Support from relatives, friends, and community groups were all significantly higher for the rural parents as a group than the urban parents as a group ($p < .001$; $p < .001$; $p < .01$ respectively). Support from coworkers was significantly greater for the rural parents than the urban parents ($p < .01$) likely due to the influence of the rural fathers who indicated more support in this respect, that approached significance, than the urban fathers. Finally, spiritual beliefs were indicated as being a significantly less a source of support for the total rural group as compared with the total urban group ($p < .01$). With respect to other sources of social support measured, such as that available from the church or other religious institution; from professionals; from special groups; and from TV/books; neither group of parents reported significantly more or less than the other.

When types of social support were considered (Table 5), there were few differences of note between the urban parents and the rural parents. Both groups appeared to have equivalent emotional support, appraisal support and altruistic support. In terms of esteem support, however, the rural parents higher mean score approached significance ($p < .05$).

On the LOT, the measure of dispositional optimism (Table 5), results indicated that mother, father and total group means for the urban sample and the rural sample were very similar. Statistical analysis did not reveal any differences of significance. Thus, in terms of tendency to anticipate good outcomes to situations, neither the urban parents nor the rural parents were stronger or weaker than each other in this respect.

With reference to global appraisals, independent t-tests of means indicated that on the reframing subscale of the FCOPES (Table 5), there were no significant differences in terms of tendency of the urban parents and the rural parents to redefine difficult situations to make them more manageable. Likewise, statistical analyses of mean scores on the passive appraisal subscale of the FCOPES (Table 5) indicated no significant differences between the urban parents and the rural parents in terms of tendency to actively (as opposed to passively) face difficulties based on a positive perception of the family's abilities to influence the outcomes.

Regarding problem-solving and coping, mean scores on all three patterns of the CHIP (Table 5) were generally higher for the rural parents when compared with the urban parents. Significant differences were found in only one of the three coping

patterns. Specifically, in terms of coping Pattern I, (namely maintaining family integration, cooperation and optimism to strengthen family life, relationships and outlook on life) the rural parents were significantly stronger than the urban parents ($p < .01$), perhaps due to the influence of the rural mothers who demonstrated more strength in this respect than the urban mothers in that the difference approached significance ($p < .05$). In terms of coping skills reflected by Coping Pattern II and Coping Pattern III, both groups of parents appeared to be equivalent.

Finally, with respect to family adaptation as measured by the FAM III (Table 5) the rural parents generally obtained mean scores reflective of better functioning than the urban parents. Despite strengths in subscales reflecting different aspects of family adaptation (particularly in task analysis and role performance which approached significance), analysis did not yield any statistically significant differences between the scores of total urban parents and total rural parents on the seven subscales and also on the total score. These results suggest that for both groups, overall family functioning appeared to fall within typical ranges.

Research Question 6

> What is most predictive of family functioning in the urban sample, the rural sample and the combined sample?

In order to examine the variability in family adaptation, represented by the XX dimension of the model, that can be explained by the other critical dimensions of the model, a series of stepwise linear regression analyses were conducted. Table 6 is the correlational matrix upon which the regression analyses were based.

Table 6

Intercorrelational matrix for all instruments using combined urban and rural data (n = 137)

	PSI	FIRM	SSI	LOT	P.APPR.	REFRAME	CHIP I	CHIP II	CHIP III	FAM III
FSI										
PSI		-.44***	-.27**	-.29***	-.35***					.40***
FIRM			.47***	.61***	.52***	.35***	.35***			-.69***
SSI				.47***	.33***		.31***			-.37***
LOT					.37***	.25**	.32***			-.53***
P. APPR.						.27**				-.39***
REFRAME							.20*			-.32***
CHIP I								.59***	.51***	-.34***
CHIP II									.51***	
CHIP III										
FAM III										

Note. All correlations p<.05 were omitted *p<.025; **p<.01; ***p <.001

For the first analysis, FAM III was entered into the equation as the dependent variable. The following ten variables were entered into the equation as the independent variables: FSI, Child Domain (PSI), FIRM Total, SSI Total, LOT, Reframing, Passive Appraisals, Coping Pattern I, Coping Pattern II, and Coping Pattern III (CHIP). Thus the equation was composed of eleven variables.

First, the urban parents were considered as a total group (Table 7). Stepwise regression analysis indicated that family strengths and resources (FIRM) accounted for 58% of the variance in family adaptation. The remaining independent variables in the equation, did not emerge in any of the analyses as contributing significant amounts to the variance in family adaptation.

Similar results were generated by the stepwise regression analysis conducted using data from the sample of rural parents (Table 8). Once again, family strengths and resources (FIRM) emerged as the only significant variable, accounting for 35% of the variance in family adaptation (FAM III). The remaining independent variables in the regression equation contributed negligible amounts to the variance in family adaptation for as measured by FAM III.

When the urban and rural data were combined to create a larger sample (n=131) for greater accuracy, once again, similar results were obtained in the stepwise regression analysis (Table 9). For the total group of urban and rural parents, stepwise regression analysis indicated that family strengths and resources (FIRM) accounted for 48% of the variance in family adaptation (FAM III).

Table 7

Summary of Stepwise Regression Analysis for Variables Predicting FAM III Scores for urban parents (n=66)

	Variable	Multiple R	Adjusted R Square	F value
Step 1	FIRM	.763	.575	84.749***

Table 8

Summary of Stepwise Regression Analysis for Variables Predicting FAM III Scores for rural parents (n=71)

	Variable	Multiple R	Adjusted R Square	F value
Step 1	FIRM	.602	.354	37.678***

Table 9

Summary of Stepwise Regression Analysis for Variables Predicting FAM III Scores for combined urban and rural mothers and fathers (n=

	Variable	Multiple R	Adjusted R Square	F value
Step 1	FIRM	.692	.475	118.818***
Step 2	LOT	.705	.489	63.416***

Note. ***p<.001

Furthermore, situation appraisals (LOT) accounted for 49% of the remaining variance, that is, 25% of the total variance in FAM III. The remaining independent variables in the equation did not emerge as contributing to the variance in FAM III in any significant way. Their influence was negligible.

These stepwise regression analyses were conducted upon data reflecting overall or domain scores, and thus considered broad factors accounting for the variance in family adaptation.

CHAPTER VI

DISCUSSION

Introduction

In this chapter, the results of the investigation are summarized and considered within the context of the theory and literature presented. The limitations of the study are then examined, and directions for future research are proposed.

Summary and implications of results

The majority of the parents in the study (70%) presented as traditional families, in that they were composed of two parents with a child/ren living in the same home. Approximately 30% were-single mothers with one or more children. There was no representation of children from other kinds of families such as same-sex or single-father families. This may serve to limit the generalizability of the findings.

In terms of socio-economic status, a wide range was represented in this sample of urban parents. Fathers' occupations ranged from unskilled workers through to executive status with the majority falling within the middle range, namely that of skilled worker. There was wide representation of gross family income which ranged from under $10,000 to within the $70 - 100,000 range. Approximately one third of the sample reported income under $20,000, and approximately one third reported

income between $30,000 and $49,000. Most of the mothers (68%) had completed high school, and most of the fathers (55%) had completed some post-secondary education. Most families could be categorized in the early stages of the family life cycle, with at least one preschool child in the family. Most families did not have other children over the age of 6 years.

All of the children, except five, presented with a diagnosis, based on a full clinical assessment, or clinical judgement, or parent report. All of the children, except one, had at least one identified area of need to focus upon. The majority of the children (89%) also presented with a second area of need. In terms of early intervention, and the belief that treatment/therapy should occur as early as possible for effectiveness, the fact that most children were diagnosed before the age of 3 years, and all were diagnosed before the age of four years, suggests both professional and parental support for this belief. Most children (64%) were receiving some kind of early intervention, others, however, were too young for a program. Most parents (61%) were not involved in intervention/treatment with their child on a daily basis, but at the other extreme approximately one quarter of the sample reported involvement in ongoing care every day of the week.

In summary, within the framework of the early stage of the family life cycle, despite the non-random nature of the sample, parents in the current study were a heterogeneous group in terms of parent characteristics and child diagnosis, which bodes well for the external validity of the study when generalizing to other parents of preschool children with disabilities.

With respect to research question 1, regarding the relationship between demographic variables and the self-report measures associated with the dimensions of the model, correlational analysis indicated no significant association between the two measures of stress and demographic variables such as child age, parent education, fathers' occupation, gross family income, involvement in a program, and so on. Similar non-significant associations were found between problem-solving and coping skills and the demographic variables, as well as family adaptation and the demographic variables.

"Type" of disability was not a demographic variable in this study because there were not sufficient numbers of each diagnosis/label to make analysis meaningful. "Severity" of disability was also not a demographic variable in this study. The experience of this writer is that the description of a child's condition as mild, moderate, or severe is somewhat arbitrary. Diagnostic assessment teams are sometimes influenced by the criteria for program placement, or the amount of funding perceived to be needed, which in turn can influence the allocation of degree of severity. According to Seligman (1989) diagnostic ambiguity is particularly evident between the mild and the moderate categories. In the current study it was felt that comparison of severity across different diagnostic conditions would not be meaningful, for example, when comparing severe speech/language delay with severe cerebral palsy.

In terms of buffering variables, that is, those that are assumed to assuage the effects of stress and enhance family adaptation, there was evidence that personal and

family strengths and resources appeared to be moderately stronger when the father was older, when the father's occupational status was higher, when both parent's level of education was higher and when the number of years together at the time the child's diagnosis was determined was longer. Furthermore, mothers who were more educated appeared to be more optimistic about situations. The tendency to take a proactive approach to challenges appeared to be stronger the older and more educated the mother, and the higher the gross family income. The buffering variable mostly reported by, or associated with fathers, was that of personal and family strengths and resources. The buffering variables mostly reported by, or associated with mothers, were those of personal and family strengths and resources, dispositional optimism, as well as passive appraisals.

Thus, personal and family characteristics such as parent's gender, parent's educational level, and family income, father's age/maturity, father's occupational status, and stability/longevity of parent's relationship, may be associated with the type and number of buffering variables utilized by parents of children with disabilities. If such buffering variables serve to enhance family adaptation, then findings in the current study correspond with those of Trute (1990) whose research results suggested that educational level of the father, as well as family income, and also a stable home environment appeared to facilitate more positive adaptation of the family as a unit. Trute's (1990) recommendation that the strengthening of the parental subsystem should be a primary concern in assisting the family to maintain a stable, nurturing, home environment seems appropriate to the current study.

With respect to research question 2, regarding comparisons with normative data, the urban parents did not report significantly more experiences of major life stressors during the previous year, which might serve to intensify pile-up of demands in the family. How valid the FSI might be conceptually, however, is debatable. Hobfoll and Spielberger (1992) have challenged the assumption that change per se (as reflected in items on most major life stressor questionnaires) is itself stressful. They suggest that positive change is not only not stressful, but can even have a positive impact on adjustment. If this is true, then responses to items on the FSI might not be appropriate to consider in terms of contributing to pile-up of demands (a negative concept) in the family. What might be implied here is that the FSI should be revised to incorporate scoring relative to parent perceptions of the event/change as being positive or negative.

In terms of stress in the parent-child system, this was significantly higher for the urban parents when compared with the normative group. Mothers in the current study reported significantly problematic levels of stress relative to the child's adaptability, to their own acceptability of the child, to perceived demandingness of the child, to child behaviours associated with distractibility/activity, to negative perception of child mood, and also to lack of experience of the child as a source of reinforcement. Fathers in the current study reported significantly higher levels of stress relative to the child's adaptability, to their own acceptability of the child and his/her condition, and to perceived demandingness and distractibility in the child when compared with the normative group. On the other hand, fathers in the current

study did not indicate more severe difficulties than the normative fathers in terms of the experience of the child as a source of reinforcement, and in terms of perceptions of the child's mood.

Thus, although the urban mothers and fathers did not appear to be experiencing a significant amount of stress relative to major life stressors, they did, however, seem to be shouldering a much higher level of stress in the parent-child system compared with normative data. This finding corresponds with those of Abidin (1986), Reddon (1990), Dyson (1991), Redington (1992), Innocenti et al. (1992), Anastopoulos et al. (1992) and others. In accordance with the viewpoint of Innocenti et al. (1992), rather than consider families of children with disabilities as "abnormally stressed," which is what they appear to be when compared with families of children without disabilities, such findings should strengthen normative perspectives of families who have a child with disabilities. Additional norms should be established utilizing large, more diverse samples of families of children with disabilities than is usually available for such measures, so that a more accurate picture of level of stress, relative to other families of children with disabilities, might be obtained. Such findings suggest that it might behove the interventionist to "normalize" stress in the parent-child system for the parents of young children with disabilities, a strategy which can be psychologically beneficial. Specifically, clinical observations of this writer have suggested that parents of children with disabilities experience a certain amount of relief when informed that their stress inducing thoughts and feelings are not uncommon, or unusual, given their circumstances.

In terms of the buffering variables available to ameliorate stress, and/or promote optimal family adaptation, the overall picture for the urban parents in the current study when compared with the normative parents was one of fewer personal and family resources, capabilities and strengths. The normative data was based upon families of children with cerebral palsy or myelomeningocele, which, although not as heterogeneous a group in terms of disability as the children in the current study, was more appropriate a sample for comparison than families of children with no disabilities. The specific areas of difference were: resources relative to esteem and communication, to mastery and health, and to extended family support. In terms of financial well-being, overall the parents in the current study were not significantly better or worse than the normative group. If separate means for mothers and fathers had been available for comparison, however, a different picture might have emerged, given that the single mothers in the group of urban mothers would likely lower the scores of all mothers. In terms of other buffering variables to ameliorate stress and/or promote optimal family adaptation, urban mothers in the current study were significantly weaker in terms of dispositional optimism. This finding is not incompatible with the propositions of the model, because less-than-optimal amounts of optimism could still exert some buffering effect on level of stress. On the other hand, given that the normative group was composed of university students, the difference is not surprising. There was no significant difference for fathers relative to their dispositional optimism when compared with the men in the normative sample. Once again, however, there appears to be a need to re-norm the measures

used with families of children with disabilities on a large sample of similar parents.

As far as global appraisals were concerned, there was no evidence of major deficits in terms of reframing as an appraisal mechanism for the mothers and the fathers in the current study when compared with the normative parents. There was evidence of significant strength in ability to face difficult life situations based on a positive perception of ability to influence outcomes, as opposed to passive avoidance of issues. Thus, according to the assumptions of the model, the parents in the current study appeared to demonstrate more than adequate abilities, capabilities and attitudes to help them appraise their stressful circumstances in ways that should serve to reduce the amount and intensity of family stress, as well as optimize family adaptation.

In terms of problem-solving and coping, another buffering variable in the model, mothers and fathers in the current study did not demonstrate deficits when compared to the normative group. Thus, if lack of deficits implies adequate skills, then according to the assumptions of the model, the parents in the current study demonstrated the following abilities: maintaining integration, cooperation and optimism in the family; maintaining social support, personal self-esteem and psychological stability in the family; and expanding knowledge of health care and the health care system through communication with other parents and consultation with health care professionals. Such abilities are assumed to help reduce stress and/or promote optimal family adaptation.

Regarding family adaptation, the outcome of family efforts to achieve a new level of balance and fit (Deardorff, 1992), although there was evidence of a significant difference in family adaptation compared with the normative group, this does not necessarily suggest family dysfunction in the urban sample, because the overall mean score was in the range that indicates normal family functioning. Furthermore, it should be emphasized that the majority of the urban parents (79%) achieved scores within the range considered normal. There were, however, some differences in different aspects of family adaptation. Task accomplishment, affective expression, sense of control in the family and role performance all appeared to be more problematic for the urban parents compared with the normative group.

Furthermore, the urban parents obtained significantly lower mean scores on the Social Desirability and the Denial subscales of the FAM III, possibly indicating that responses on other scales of the FAM III should be treated with caution. It has already been noted on page 83 that the majority of parents in the urban sample obtained scores within the normal range on the response-style scales of Social Desirability and Denial. Outliers, with extremely low scores on these scales, served to reduce the mean scores. Thus the accuracy of the majority of responses on the FAM III are not necessarily in question. It must not be overlooked that the normative group from whom the normative data was obtained was not composed solely of families of preschool children with disabilities. Whether or not any such families were included in the normative sample is not known. When the responses of the current urban sample of parents on the FAM III were compared with

responses of a similar group of parents of preschool children with disabilities, for example the rural sample (Table 35), a more appropriate comparison was made. There was no evidence of significant differences on any of the scale on the FAM III, including the two response-style scales of Social Desirability and Denial. Thus, perhaps additional normative data should be available in the FAM III manual specifically for use with families of preschool children with disabilities.

In summary, when compared with the normative groups, the parents in the current study demonstrated significantly higher levels of stress contributing to pile-up of demands. Yet despite the presence of clinically significant levels of stress in the parent-child system for more than 50% of the parents, 79% reported family adaptation within a non-problematic range. These figures suggest that high levels of stress do not necessarily indicate less than optimal levels of family adaptation. This assumption corresponds with results of studies by Bristol (1987), Reddon (1989), Dyson (1991), Redington (1992), and others. On the other hand, however, given that the response style subtests in the measure of family adaptation were significantly lower than those of the normative group, such responses might suggest the need for additional normative data to be included in the FAM III.

With reference to research question 3, regarding mother and father comparisons, although the urban parents reported significantly more stress than the normative group, very few significant differences were observed when comparisons were made between the urban mothers and the urban fathers on the self-report measures. On the two measures of pile-up of demands in the family, although the

mean scores for mothers were generally higher than the mean scores for fathers, neither parent reported being significantly more overloaded with stress than the other relative to major life stressors or to perceived stress in the parent-child system. Similar results were obtained when couples were selected from the total sample and comparison of means was done. These findings correspond to those of Beckman's (1990) regarding no significant differences between mothers and fathers on the Child Domain of the PSI.

Likewise, similar results were obtained for mother and father perceptions of adaptation in the family which was perceived by both parents as falling within normal limits, that is, as being healthy and non-problematic.

In terms of buffering variables, both mothers and fathers perceived equivalent overall personal and family strengths and resources with respect to esteem and communication, mastery and health, financial well-being and extended family support. Although both mothers and fathers perceived equivalent amounts of social support, different sources were reported as being more important, or more frequently accessed than others. Specifically, fathers reported significantly more support from co-workers than mothers did, corresponding to findings in the Redington (1992) study. In view of the fact that most mothers in the urban sample did not work outside of the home, this source of support was obviously not available to most mothers. Mothers reported less support from spouse than fathers did. Fathers, however, reported more support than mothers did, and this difference approached significance. From a traditional point of view, this could imply that mothers are

generally more supportive and nurturing than fathers, who might not be as readily available to support mothers, who consequently feel a deficit in this respect. This finding also corresponds with observations by Krachovil and Devereux (1988) that sometimes a spouse was "unavailable" to support the other spouse supposedly because of the effort needed to maintain his/her equilibrium. Furthermore, the finding of fathers reporting more support from spouse than mothers could correspond with findings by Krauss (1993), that in the face of a crisis regarding their child's development, fathers may turn inward to their families for support, whereas mothers may turn outward to their social network.

Mothers reported more support from professionals than fathers did, and this difference also approached significance. Mothers typically accompany the child to appointments and thus have more contact and familiarity with professionals, which may enable them to feel more support from this source. Neither parent appeared to be more lacking than the other in terms of types of social support available to be accessed, namely, emotional, esteem, network, appraisal, and altruistic. These findings relative to both sources and types of social support bode well for the urban parents in view of findings by Frey et al. (1989) that adequacy of social network predicted adjustment for both mothers and fathers.

Neither parent in the current study appeared to be more deficient than the other in terms of dispositional optimism, the measure of situation appraisals, nor in the ability to reframe problem situations and deal with such situations in an active rather than passive manner. Likewise, neither parent was more deficient or

proficient than the other in terms of coping skills reported.

According to the assumptions of the model, such buffering variables can serve to reduce the amount of stress in the family and also to optimize family adaptation. Although there were no major discrepancies in perceptions of pile-up of demands in the family between mothers and fathers, it should not be overlooked that the parents in the current study reported significantly more stress than the normative group. Yet, contrary to the argument made by Hobfoll and Spielberger (1992) that the family as a group is not coping even if one member manifests distress symptoms, this was not the case in the current study. Both mothers and fathers perceived high levels of stress in the parent-child system, but coping skills were adequate and family adaptation was perceived by both to be within normal limits.

The purpose of the mother/father comparisons was to add more details to the picture of the father of the child with disabilities. It was evident in the current study that the burden of stress in the family did not appear to be shouldered more by one parent than the other, and that the attainment of an optimal state of family functioning appeared to be related to the efforts of both parents, even though they might access different means to accomplish this end. It should be noted, however, that the differences between mothers and fathers relative to sources of social support were not significant.

With respect to research question 4, regarding single-mothers and mothers with partners, very few significant differences were observed between the two groups on the self-report measures. Differences occurred on only one subtest of the PSI, on

two subtests on the FIRM, and on two subtests of the SSI.

In contrast to observations by Vadasy (1986) and Bailey and Wolery (1992), there were no significant differences in the current study between single-mothers and mothers with partners raising children with disabilities with respect to major life stressors, nor with respect to overall stress in the parent-child system (even though single-mothers obtained a much higher mean score overall on the PSI than the mothers with partners). It must be emphasized, however, that relative to normative data, both groups of mothers reported significantly more stress than typical mothers. There was one aspect of stress in the parent-child system that appeared to be more problematic for the single-mothers than the mothers with partners, and this was child adaptability, that is, the ability of the child to adjust to changes in the physical/social environment. According to Innocenti et al. (1992), child adaptability represents a defining characteristic of children with disabilities. Abidin (1983) described behavioral characteristics associated with high scores in this area as including: perseveration and inability to change from one task to another without emotional upset, overreaction to changes in sensory stimulation and changes in routines, avoidance of strangers, and difficulty to calm once upset. It is possible that the single-mothers might tend to react to such behaviours in the child with more ineffective behaviour management skills than the comparison group. Thus, a need for more effective strategies of behaviour management and parenting skills for the single-mothers, specifically related to characteristics of children with disabilities, might be indicated.

There was no evidence suggesting high degree of stress relative to financial difficulties for the single-mothers as written in the literature (Bailey & Wolery, 1992). But the self-report measures of pile-up of demands did not contain items reflective of financial stress. The expected stress relative to lack of support from spouse (McCubbin, 1989; Schilling, 1986; Trute, 1990) was also not reflected in measures of pile-up. These areas of vulnerability did, however, exist for the single mothers. Measures reflective of the buffering variables indicated their presence might serve to exacerbate stress, but they were not directly included in the pile-up of demands. Thus overall stress for single-mothers might be greater than indicated in this study due to the lack of inclusion of some areas of stress in the pile-up dimension of the model. The implication might be that the FSI and the PSI do not give a comprehensive indication of pile-up of demands in the family. Perhaps there is a need to include measures reflecting stress due to a variety of other factors such as finances in the family, and perhaps single-parent status. On the other hand, support for use of the model to give a complete picture of contributing factors to stress and family adaptation in hereby given, in that if pile-up of demands alone was considered, lack of resources that could serve to exacerbate stress would not have been revealed.

In terms of the buffering variables proposed by the model that are assumed to ameliorate stress and optimize family adaptation, there was some variability between single- mothers and mothers with partners on two dimensions of the model. Overall, mothers with partners reported having significantly more resources to access than the single-mothers. Specifically, single-mothers were significantly lower on

financial well-being, corresponding with findings from the McCubbin study (1991). This is likely due to the fact that most of the single-mothers were on welfare. Single-mothers typically function at poverty levels, defined by Statistics Canada as being below the annual income level of $20,000. Thus it is not surprising that they were significantly lower than the mothers with partners in terms of ability to meet financial commitments, adequacy of financial reserves, ability to help others financially, and optimism about the family's future.

Single-mothers also reported significantly less extended family support. This is likely numerical in that two co-habitors likely can access more relatives than a single parent. Single-mothers also reported fewer sources of social support relative to spouse, which is not surprising given that many had no contact with the father of their child. Yet if Crnic and Greenberg (1990) are correct in their suggestion that emotional support from friends, somewhat more than husbands or partners, tends to buffer most mothers from the adverse effects of the daily hassles of parenting, then fewer sources of social support relative to spouse (when compared with mothers with partners) might be of no consequence. What might be important is that perception of adequate amounts of social support, regardless from whom, serve to reduce stress, as opposed to social isolation which may exacerbate stress and dysfunction.

In terms of other sources of social support, mothers with partners indicated significantly more support from co-workers than the single-mothers did, because none of the single-mothers worked outside the home, whereas some of the mothers with partners did. There was significant lack of support from a church or synagogue

reported by the single-mothers, possibly reflecting differences in lifestyles and/or values. Yet in terms of spiritual beliefs, there were no differences. Neither were there significant differences between single-mothers and mothers with partners on any other sources of social support, namely from children, from friends, from community groups, from professionals, from special groups, from T.V./books, and other sources. Both groups of mothers were equivalent in terms of types of social support, in dispositional optimism, and in problem-solving and coping skills.

Finally, family adaptation was reported by both groups of mothers to be within the normal range, suggesting healthy, non-problematic functioning regardless of level of stress, even though 4 of the single-mothers, did have FAM scores outside of then normative range. This corresponds to findings from studies by Schilling et al. (1986) and McCubbin (1989), that, contrary to expectations, single-mothers and mothers with partners raising young children with disabilities adapt to the task. In the current study, both groups of mothers seem to have more in common, relative to the dimensions of the model, than expected. This should not lead to complacency on the part of professionals, however. Individuals and their own unique situations and circumstances should be considered in their own right and needs should be determined on that basis.

With respect to research question 5, regarding differences between the urban data in the current study and rural data from Redington's (1992) research, comparative analyses indicated several significant differences clustering on three of the seven dimensions of the model. Basically, in terms of level of stress, sources of

social support and problem-solving and coping, the picture appeared to be healthier and stronger for rural parents. Yet in terms of overall family adaptation, there was no significant difference between groups, and the mean scores of both groups fell within normal limits.

Beginning with stress, there was no evidence of significant difference in the experience of life stressors during the previous year between the two groups. In terms of stress in the parent-child system, however, urban parents appeared to be shouldering significantly more than the rural parents. (It should not be forgotten that both groups reported significantly more stress than the normative sample). The particular areas of concern for all urban parents compared with all rural parents were: child adaptability, child acceptability, and child demandingness/degree of bother, all of which approached significance. Urban mothers in particular showed higher levels of stress than rural mothers, relative to the adaptability of the child, that is, the characteristic that has been said to define a child with disabilities (Innocenti et al., 1992). This higher score for the urban mothers, which approached significance, was likely due to the influence of the responses of the single-mothers in the urban sample.

In terms of the buffering variables, several sources of social support plus one problem-solving and coping pattern were significantly stronger for the rural parents. Out of 12 sources of social support, there were significant differences in 7. Rural parents (specifically rural mothers) reported significantly more support from spouse than urban parents, but the lower score of the urban mothers could have been due

to the influence of the responses of the single mothers in the urban sample. Support from children was significantly greater for the rural parents as a group, due to the responses of the rural fathers who demonstrated more positive responses in this respect that approached significance, than the urban fathers. Support from relatives, friends, and community groups was also significantly greater for the rural parents as a group than the urban parents. Rural mothers demonstrated significantly more support in these area than urban mothers, and rural fathers demonstrated more support in these areas that approached significance, than urban fathers. These results correspond with findings in Redington's (1992) study, and also with the traditional view of rural life which depicts greater involvement with informal sources of support, namely, relatives, friends and neighbours (Waltman et al., 1991; York et al., 1989). Support from co-workers was significantly greater for rural parents who indicated more support in this respect than the urban parents. Finally, spiritual beliefs were indicated as being significantly less a source of support for the total rural group as compared with the total urban group. Perhaps for urban parents, support from spiritual beliefs fills the gap when more tangible sources of support, say from family, friends and neighbours are lacking. In terms of types of social support, comparisons did not indicate any differences of significance.

Of the three problem-solving and coping patterns measured, one in particular emerged as a more utilized, or accessed, buffering variable for rural parents than urban parents. In terms of maintaining family integration, cooperation and optimism to strengthen family life, relationships and outlook on life, the rural parents were

significantly stronger than the urban parents.

Finally, relative to family adaptation, overall, both urban and rural parents reported functioning within normal limits. In the different aspects of family adaptation, however, some results approached significance. Rural parents reported better levels of basic task accomplishment relative to the child and the family as a whole, and rural mothers reported better competency regarding roles in the family. Yet although these differences approached significance, the actual mean scores being compared still fell nicely within the normal range.

Thus it can be said that despite high levels of stress for both groups of parents relative to the normative data, most of the urban and rural parents reported normal, non-problematic family functioning in terms of adaptation to the child with disabilities. This finding corresponds with that of Dyson (1991) that parental stress in families of children with disabilities is not necessarily associated with family dysfunction. Concerns from the literature (Waltman et al., 1991) and from this writer's clinical observations regarding lack of services for rural parents of children with disabilities do not seem to have exerted an adverse effect on level of stress, resources available and outcome in terms of family adaptation. It might be speculated, therefore, that aspects of the traditional rural lifestyle enhance buffering variables for rural families. Such speculations, however, should not preclude the necessity of intervention. Further research in this respect might be warranted.

With respect to research question 6, regarding variables most predictive of family adaptation, findings corresponded with those of Reddon (1989) and Dyson

(1991) in that the severity of child-related stress alone does not appear to predict the adaptive capacity of the family. In the urban sample, the rural sample and the combined sample, overall stress in the parent child system contributed only minimal amounts to variance in family adaptation. Thus, while virtually all of the parents in the urban sample, the rural sample, and the combined sample reported high levels of stress overall in the parent-child system, many were apparently functioning well in terms of family adaptation.

Results of the stepwise regression analyses emphasized the importance of family system strengths and resources. Family strengths and resources emerged as the major contributor to variance in adaptive functioning for the urban parents, the rural parents and the combined sample. This corresponds with findings from the Lavee et al. study (1987) whereby family system resources were found to facilitate adaptation.

For the total group of urban and rural parents, the finding that situational appraisals emerged as the second most importance variable accounting for variance in family adaptation corresponds to a certain extent with results of Bristol's (1987) study, which found that appraisal measures were significant predictors of family adaptation in her sample of mothers.

Corresponding to findings by Dyson (1991) there was no evidence that high levels of stress account for significant amount of variance in family adaptation.

Clinical implications

Results of this study suggest that when attempting to enable a family to understand and gain insights into itself, service providers could be mindful of demographic variables associated with type and number of buffering variables accessed by mothers and fathers. Such information may also be helpful to service providers in terms of determining which parents might be more at risk and might need more support, education, and encouragement. For example, younger, less educated parents, generally of lower socio-economic status, who have been together for only a short time, might be more at risk in terms family adaptation than older, more educated parents of higher economic status, whose family unit is more stable.

Service providers should not assume that the presence of a young disabled child in the family will inevitably mean family disorganization, chaos, or dysfunction. On the other hand, it should not be assumed that normal family functioning as measured by FAM III precludes intervention. Normal scores on a measure of family adaptation might not reflect family needs in terms of stress reduction and enhancement of buffering variables. Such information should likewise be conveyed to the family.

High levels of stress experienced by families of children with disabilities should be "normalized" by service providers. Parents should be informed that families of children with disabilities typically experience high levels of stress in the parent-child system. And this is not unusual. It should be emphasized that such stress can be reduced, or effectively managed, by enhancing and expanding family

resources; by accessing and increasing social supports; by reframing, by being optimistic and proactive in difficult situations; and by utilizing coping skills. Furthermore, it should be emphasized that high levels of stress do not necessarily mean that the family is dysfunctional. The model utilized in this study could provide a most useful framework, in a quantitative or a qualitative manner, for assessment of current family functioning and also to guide intervention strategies as indicated by areas of weakness or deficit.

Findings from the current study suggest that urban parents of preschool children with disabilities might be at more risk than rural parents of preschool children with disabilities and also parents of preschool children without disabilities, in terms of higher stress in the parent-child system. They might exhibit less than optimal level of family resources and sources of social support. Thus resources must be made available to provide assistance in these areas in order to maximize their ability to promote healthy adaptation. For all mothers of children with disabilities, and in some respects fathers too, there appears to be a need for reduction of stress relative to the child's adaptability, to the parents' own acceptability of the child, to perceived demandingness of the child, to child behaviours associated with distractibility/activity, and to negative perception of child mood as well as lack of experience of the child as a source of reinforcement. The teaching of parenting skills and behaviour management strategies, the giving of information about the social, emotional and psychological needs of children might be helpful in this respect.

Findings from the current study suggest that service providers need to teach parenting skills to single-mothers who exhibit stress in behaviour management relative to the distractibility/activity level of the child with disabilities. Service providers also need to aid single-mothers in terms of financial support, and help them obtain other sources of non-spousal support to maximize their ability to promote family adaptation.

Findings from the current study suggest the importance of teaching/counselling parents of preschool children with disabilities to develop more positive perspectives for appraising situations. Learning and utilizing optimistic reframing techniques might also be beneficial to such parents in terms of promoting optimal family functioning. Basically, a key intervention with distressed families might be to help them reorganize their thinking, which in turn might affect their outlook, and thus their behaviour.

Finally, findings from the current study suggest that mothers and father differences in terms of accessing different resources to accomplish the same end, namely more optimal family functioning should be acknowledged, and encouraged by service providers. Differences between parents relative to buffering variables utilized can be complementary and beneficial to healthy family adaptation.

In summary, the model has been demonstrated both in the literature and in the current study to provide an extremely useful framework for obtaining a more complete picture of the variety of factors contributing to family adaptation. The model should be utilized by service providers for both formal and informal

assessment of families of preschool children with disabilities, and, as recommended by Deardorff (1992), McLellan (1990) and others, to give directions for intervention.

Limitations of the study

There are several limitations to the current study that may affect generalizability of findings. The sample of urban parents was not a random sample. Families were identified and approached by Health Centre staff, then requested to volunteer. Thus, these parents might not be representative of the complete population of urban families raising preschool children with disabilities. For example, they may have been higher functioning, and better able to cope with the extra demands created by their participation. The factor of non-randomness is a threat to the external validity of the study. On the other hand, there was a broad range of socioeconomic status, of education, of the child's diagnosis, and so on. Such heterogeneity is appropriate in that it is representative of a broader range of parents of children with disabilities.

There are also several limitations in the use of questionnaires. Data contained therein might be contaminated by "response sets" such as acquiescence or a proneness to agree with positive statements or questions, or by a lack of comprehension of the questions, especially in the situation of new immigrants for whom English is a second language, and for those participants who might have poor reading skills. Generally, self report data is at risk for response bias and social desirability effects. The high degree of social desirability response bias evident in the

FAM III profiles cannot be ignored. In the situations where the examiner was required to read the questionnaires with low functioning parents, biased reactions might have occurred due to the personality/characteristics of the interviewer or respondent, or both, that elicit unduly favourable or unfavourable patterns of responses (Isaac & Michael 1981).

Generally, limitations of self-report measures include distortion in the recall of family information, lack of objectivity in perceptions which guide the recording of self-report observations, difficulty of deriving family level measures from individual self-report measures. Hence the focus on "parent" as opposed to "family" even though family functioning is assumed. Furthermore, although husbands and wives were instructed to complete each self-report measure independently, this could not be assured, given that parents were left the materials and instructed to complete them in their own time. If the parents did not comply with the request not to discuss the questions with spouses, this may have obscured some mother/father differences, and may have somewhat limited the degree of parental disclosure. Once again, the relatively high degree of social desirability response bias evident in FAM III profiles cannot be ignored.

Another limitation of the design of the current study is that it is less rigorous than the experimental approach and a control group was not used for comparison purposes. This limitation was, however, alleviated by the use of instruments standardized on a "normal" population. One of the instruments used, the SSI, however, provided no normative information. Ideally, the measures should have

norms based on a cross section of the population, and additional norms specific to the "atypical" population being studies. Although two of the instruments used, namely the FIRM and the CHIP were normed on families with seriously/chronically ill children, other instruments used were normed on samples, which though large, were not always equivalent to those in the current study. For example, the LOT was normed on college students, the PSI and the FAM III were both normed on parents of "typical" children. As a result it is difficult to determine if the contributions of the various family resources, social supports and coping patterns are unique to families with perceived stress related to raising a child with a disability.

There are other limitations relative to the measures used in the current study. There is some doubt as to whether the FSI gives a true indication of negative effects of pile-up in the family in terms of stressors experienced during the previous year. If change per se is not stressful, and positive change is not only not stressful but beneficial, further investigation regarding the use of the FSI is warranted.

This author feels that it was difficult to differentiate between the instruments measuring the CC dimension, and the CCC dimension, that is, the LOT and the FCOPES respectively. In terms of face validity, this author felt that either measure could provide information about either construct. This might indicate that compression of CC and CCC into one concept, namely, overall appraisals (as opposed to separately considering situation appraisals and global appraisals) might be simpler and more meaningful.

The General Scale of FAM III was designed to assess overall health or

pathology in the family from the systems perspective (Copeland & White, 1991). While this family systems measure constitutes a breakthrough in its focus on characteristics of families rather than characteristics of individuals, it nevertheless is limited in that it can only give individual perceptions of the family, rather than a more direct measure of family functioning (Copeland & White, 1991). Hence the focus on "parents" in the current study as opposed to "family", family being conceived as an entity that is more than the sum of its parts. Furthermore, other family members, such as siblings, were not included in this study which also restricts the generalizability of these results to the adaptation of parents, rather than the family unit as a whole.

As noted by Reddon (1989) the results of this study are highly dependent on the accuracy of FAM III as a measure of family adaptation. The FAM III is a relatively new instrument. The development of additional norms specifically for families of preschool children with disabilities will make responses on this measure more meaningful.

Despite these limitations, it should be emphasized that family measurement is not a well developed area, and the measures used in the current study are considered to be the best available at this point in time in terms of reflecting the constructs indicated by the dimensions of the model.

Directions for Future Research

The model lends itself to further research investigating its propositions and its composition. The regression analyses in the current study were a beginning, but a path analysis of the model might be conducted to evaluate the model as a whole, and thus continue the work begun by Lavee et al. (1987).

Other modified versions of the model, based on theoretical propositions, should be explored. Other variables not considered in the current study could be incorporated, such as marital satisfaction, marital cohesion, and so on. On the other hand, perhaps a more simplistic, parsimonious version of the model might be proposed, for example, whereby the CC and CCC dimensions have been condensed into one appraisals dimension, based on difficulty in differentiating between the constructs measured by the instruments used to reflect CC and CCC.

In terms of the instruments used in this study and concerns expressed about them, there seems to be a need for normative data to be collected on the Social Support Inventory. If continued research into families of children with disabilities is to occur, there is a need for additional norms to be obtained relative to families of children with disabilities for more accurate comparison purposes. Instruments that should have additional norms are the PSI, the FAM III, and the LOT. This does not mean to imply that currently available instruments should not be used to measure stress, family adaptation, and dispositional optimism. These instruments can certainly be used to help intervention efforts. Family measurement, however, is not a well-developed area especially in dealing with nontypical populations and there is a need

for the continuing development of tests that accurately reflect the phenomena being assessed for such populations.

While the assumption regarding the contribution of major life stressors to pile-up of demands in the family is not being questioned, it might be within keeping of current research findings to reconsider the structure of questionnaires reflecting major life stressors such as the FSI. If change per se is proposed to be non stressful, and positive change is not only non stressful but can exert a positive impact on adjustment (Hobfoll & Spielberger, 1993), it perhaps behooves test constructors to revise questionnaires regarding major life stressors to incorporate information from the respondent as to whether changes reported are perceived as exerting a positive or negative impact on the family. Scoring should reflect positive versus negative perceptions. Only the negative scores should be used relative to pile-up of demands in the family system. Thus, a recommendation for future research might be to revise Life Stress Indexes to incorporate perceived impact on the respondent. Only the negative event/change should be used in studies of stress.

The model used in this study holds promise for use in a variety of other situations. For example, investigation of the phenomenological use of the model as a framework to guide family counselling/intervention should occur. For example, a therapist's open-ended questions to parents to verbalize their perceptions of the current state of their family could include the following:

> "What is going on in your life at the moment that has brought you here?" (pile-up of demands)
> "What is your perception of these happenings" (appraisals).
> "Tell me about your personal/family strengths to handle stress" (resources).

"Who can you count on to help?" (sources of social support).
"In what way?" (type of social support)
"How have you tried to handle things?" (problem solving and coping)
"How would you describe functioning in your family?" (family adaptation)

Furthermore, the model need not be exclusive to family therapy/intervention or research. Although the model was originally developed to describe and explain variables contributing to family functioning, there is no reason why it cannot be used at the level of the individual, in terms of variables contributing to personal balance and harmony. The dependent measure of family functioning thus would become individual functioning. Future research should investigate the appropriateness of the phenomenological use of the model as a framework to guide individual counselling with clients who present with a variety of conditions such as depression, anxiety, occupational stress and so on.

Finally, a follow-up study might be done in terms of intervention as necessary with pre- and post-intervention measures with selected families from the current study. Intervention efforts might address needs that are indicated by responses on the self-report measures relative to the different dimensions of the model.

In conclusion, the modified version of the adaptation phase of the T-Double ABCX model (McCubbin & Thompson, 1987) as utilized in the current study, certainly seems to hold much promise for providing a framework to understand patterns of functioning in families raising preschool children with disabilities. Its use in this respect should be encouraged.

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APPENDIX A

COMPONENTS OF THE T-DOUBLE ABCX MODEL

APPENDIX A-1

COMPONENTS OF THE ADAPTATION PHASE OF THE T-DOUBLE ABCX MODEL OF FAMILY ADJUSTMENT AND ADAPTATION (McCUBBIN & THOMPSON, 1987)

The AA factor refers to the pile-up of demands, the accumulations of stressors and strains as they occur over time in relation to various crisis situations. They may include specific hardships associated with the crisis situation, the ongoing normative family transitions, prior strains resulting from unresolved stressors/transitions, and/or strains inherent in various ongoing roles of family members, strains resulting from those behaviours the family utilizes to cope with the crisis situation, and strains resulting from intra-family and social ambiguity.

The T factor refers to the family type, that is, the set of basic attributes about the family system which characterize and explain how a family system typically appraises, operates, and/or behaves. These behaviours are predictable and discernible patterns that are reinforced by rules and routines, and play an important role in explaining the family's responses to stress.

The BB factor refers to those resources and strengths which are available to the family for meeting various demands. Resources may be tangible (such as money), or intangible, such as the personal resources of self-esteem; innate intelligence, educational level and experience, personality traits; or locus of control. Generally

there are two levels of resources within this factor, namely personal resources and family resources (for example, family integrity, family adaptability, level of organization and family communication).

The BBB factor refers to community resources and supports. Resources are defined as those characteristics, competencies and means of persons, groups and institutions outside of the family which can be accessed or called upon by the family to use in the face of various demands. This includes the broad range of professional services typically accessed by families, as well as the various institutions within the family's meso-environment (church, school, place of occupation) and macro environment (government policies directed towards enhancing family life). Social support refers to "appraisal support" whereby one receives feedback regarding performance on various life tasks for the purposes of self evaluation. It also refers to "altruistic support" whereby one is the recipient of goodwill from others from having given something of one's self. Social support is distinguished from social network. The former involves relationships invoking a qualitative exchange of communications in an atmosphere of trust. The latter refers to all the people one has contact with and from whom one can potentially obtain "support".

The CC factor, namely situation appraisals, refers to the interpretation of the demands, capabilities and their subsequent interaction. This interpretation may be real or perceived. It typically includes many components of the demands (eg. severity, degree of controllability, amount of change implied) and capabilities (ie adequacy and sufficiency of strengths and resources).

The CCC factor, namely global appraisals and family schemas, refers to the set of beliefs or assumptions held by the family pertaining to themselves in relation to each others, as well as to their family in relation to the larger community. Families who demonstrate strong "family schema" typically emphasize their investment in themselves, their values and their goals. Emphasis is also placed on their investment in the family's collective 'we", their sense of shared control and trust in others, as well as their optimistic view of life situations complemented by a relativistic view of life circumstances and willingness to accept less than perfect solutions to all their demands.

The PSC factor, namely, problem-solving and coping, refers to the process of acquiring and allocating resources for meeting various demands. The function of coping is to restore or maintain the balance between demands and resources. Five coping strategies have been identified: reduction or elimination of demands; acquisition of additional resources not currently available to the family; maintenance of existing resources to allow for allocation and re-allocation to meet changing demands; effective management of tension associated with ongoing strains; and use of appraisal to change the meaning of a situation to make it more manageable.

The XX factor is the level of family adaptation and/or the family's transition back into a crisis situation. It refers to the reorganization and restructuring of the family system, for example, in modifications of established roles, rules, goals and/or patterns of interaction, in order to restore some level of functional stability and/or improve the general level of family satisfaction.

APPENDIX B

LETTERS AND INSTRUMENTS

APPENDIX B-1

Dear Parents,

Families with young children are increasingly involved with community services such as health units and child care services. A number of programs have developed over the past several years to provide specific support to families with young children having developmental needs. As a graduate student at the University of Alberta, I am particularly interested in learning more about family's experiences meeting their child's needs at this early stage of development.

Because of your unique experience as a parent raising a child at this developmental stage (birth to 5 1/2 years), we felt you could help us in this matter. We are interested in looking at three aspects of family experiences:

1) The demands encountered by families in raising young children with developmental needs;

2) The unique family characteristics, strengths, as well as personal and community resources that families draw upon to meet those demands;

3) The service needs (both health and developmental) that families feel are priorities.

Thus, we are asking for your participation in this project. Your participation would involve an introductory meeting (approximately 30 minutes) as well as the completion of a set of questionnaires related to the three areas just mentioned. The total time involved for completion of the questionnaires is expected to be about two hours.

Should you agree to participate in this project, arrangements will be made to meet with you to explain aspects of the project as well as to allow you to make a final decision regarding your participation. Details concerning the questionnaires will also be discussed at this time.

Your participation in this project is entirely up to you and you would be free to withdraw at any time you felt necessary. All information gathered in this project will be used to assist in the further development of our understanding of the needs of families with young children. In addition, all information obtained in this project will be confidential and anonymous. Your names will not be placed on any of the questionnaires and the information collected will be treated as one large group. Hence, your privacy and confidentiality will be ensured.

Your participation and cooperation in this project would be greatly appreciated. Thankyou for your time in reading this letter. We look forward to your participation.

Sincerely,

Ann Foster M.Ed.
Graduate Student
University of Alberta

Gerard Kysela Ph.D.
Professor
University of Alberta

INITIAL CONSENT FORM

I/We_____may wish to participate in this research project. I/We would like to participate in the first meeting and make our final decision following that information session.

Name_____

Date_____

Name_____

Date_____

I/We may be reached at the following numbers:

Home_____

Work_____

Please return this form to the coordinator or supervisor of your program.

APPENDIX B-3

FINAL CONSENT FORM

I/We_____have participated in the initial meeting related to this project.

I/We understand the nature and intent of this project and are willing to participate.

I/We understand that any information given will be treated as anonymous and confidential and that I/we have the right to withdraw from this project at any point in time should I/we see fit.

Signature_____

Date_____

Signature_____

Date_____

APPENDIX B-4

SUMMARY OF INSTRUMENTS AND ORDER OF PRESENTATION

INSTRUMENT	DIMENSION MEASURED
1. FSI	AA
2. PSI: Child Domain	AA
3. FCOPES: Reframing subscale Passive Appraisals subscale	CCC
4. FIRM	BB
5. LOT	CC
6. CHIP	PSC
7. FAM III	XX
8. SSI	BBB

APPENDIX C

DEMOGRAPHIC CHARACTERISTICS

APPENDIX C-1

SUMMARY OF SELECTED PARENT DEMOGRAPHIC CHARACTERISTICS

	TOTAL SAMPLE		LOCATION 6		LOCATION 7		LOCATION 8		LOCATION 9	
	freq.	valid %	freq.	valid %	freq.	valid %	freq.	valid %	frequency	valid %
MOTHERS' OCCUPATIONS	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
full time caregiver	38	86.4	14	87.5	9	90	8	72.7	7	100
unemployed	2	4.5	1	6.3			1	9.1		
semi-skilled workers	1	2.3	1	6.3						
clerical/technical/sales workers	1	2.3			1	10				
administrative/small business	1	2.3					1	9.1		
manager/prop/medium business	1	2.3					1	9.1		
FATHERS' OCCUPATIONS	(n=31)		(n=9)		(n=8)		(n=8)		(n=6)	
unemployed	2	6.45			2	25.0				
unskilled worker	1	3.23			1	12.5				
semiskilled worker	8	25.81	2	22.2	2	25.0	4	50.0		
skilled worker	10	32.26	2	22.2	2	25.0	3	37.5	3	50.0
clerical/technical	2	6.45	1	11.1					1	16.7
administrative/small business	2	6.45	1	11.1					1	16.7
manager/prop/medium business	5	16.13	3	33.3	1	12.5			1	16.7
executive/prop large business	1	3.23					1	12.5		
GROSS FAMILY INCOME	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
under $10,000	2	4.5	1	6.3			1	9.1		
$11 - 19,000	14	31.8	5	31.3	5	50	3	27.3	1	14.3
$20 - 29,000	8	18.2	3	18.8	2	20	1	9.1	2	28.6
$30 - 39,000	7	15.9			1	10	3	27.3	3	42.9
$40 - 49,000	7	15.9	4	25.0	2	20	1	9.1		
$50 - 59,000	1	2.3	1	6.3						
$60 - 69,000	4	9.1	2	12.5			1	9.1	1	14.3
$70 - 100,000	1	2.3					1	9.1		
MARITAL STATUS	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
married	28	63.6	9	56.3	5	50.0	8	72.7	6	85.7
separated	4	9.1	2	12.5			1	9.1	1	14.3
divorced	4	9.1	2	12.5			2	18.2		
single	5	11.4	3	18.8	2	20.0				
common-law	3	6.8			3	30.0				

APPENDIX C-2 SUMMARY OF SELECTED PARENT DEMOGRAPHIC CHARACTERISTICS

	TOTAL SAMPLE		LOCATION 6		LOCATION 7		LOCATION 8		LOCATION 9	
	freq.	valid %	freq.	valid %	freq.	valid %	freq.	valid %	freq.	valid %
MOTHERS' EDUCATION	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
no response	1	2.3			1	10.0				
less than 7 years	1	2.3					1	9.1		
junior high school	7	15.9	3	18.8	1	10.0	2	18.2	1	14.3
some high school	5	11.4	2	12.5	2	20.0	1	9.1		
completed high school	14	31.8	5	31.3	3	30.0	3	27.3	3	42.9
some college education	9	20.4	3	18.8	2	20.0	1	9.1	3	42.9
completed college or university	6	13.6	3	18.8	1	10.0	2	18.2		
graduate/professional training	1	2.3					1	9.1		
FATHERS' EDUCATION	(n=31)		(n=9)		(n=8)		(n=8)		(n=6)	
less than 7 years	1	3.2					1	12.5		
junior high school	3	9.7			2	25.0			1	16.7
some high school	2	6.5			1	12.5			1	16.7
completed high school	8	25.8	3	33.3	1	12.5	2	25.0	2	33.3
some college education	10	32.3	2	22.2	4	50.0	3	37.5	1	16.7
completed college or university	6	19.4	3	33.3			2	25.0	1	16.7
graduate/professional training	1	3.2	1	11.1						
RELATIONSHIP TO CHILD	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
natural mother	42	95.5	14	87.5	10	100	11	100	7	100
adoptive mother	2	4.5	2	12.5						
RELATIONSHIP TO CHILD	(n=31)		(n=9)		(n=8)		(n=8)		(n=6)	
natural father	29	93.5	8	88.9	7	87.5	8	100	6	100
foster father	1	3.2			1	12.5				
adoptive father	1	3.2	1	11.1						
YEARS MARRIED AT DIAGNOSIS	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
not applicable	14	31.8	7	43.8	3	30.0	3	27.3	1	14.3
less than 1 year	2	4.5	1	6.3					1	14.3
1 - 3 years	5	11.4					2	18.2	3	42.9
3 - 5 years	3	6.8			3	30.0				
5 - 10 years	15	34.1	6	37.5	3	30.0	5	45.5	1	14.3
more than 10 years	5	11.4	2	12.5	1	10.0	1	9.1	1	14.3

APPENDIX C-3 SUMMARY OF SELECTED PARENT DEMOGRAPHIC CHARACTERISTICS

	TOTAL SAMPLE		LOCATION 6		LOCATION 7		LOCATION 8		LOCATION 9	
	freq.	valid %	freq.	valid %	freq.	valid %	freq.	valid %	frequency	valid %
SIBLINGS IN THE HOME	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
none	8	18.6	4	26.7	2	20.0	1	9.1	1	14.3
one	19	44.2	5	33.3	3	30.0	6	54.5	5	71.4
two	11	25.6	5	33.3	2	20.0	3	27.3	1	14.3
three	4	9.3	1	6.7	2	20.0	1	9.1		
four	1	2.3			1	10.0				
missing data	1		1							
OTHER CHILDREN: DISABILITIES										
no	34	82.9	13	86.7	6	75.0	8	12.7	7	100
yes	7	17.1	2	13.3	2	20.0	3	27.3		
missing data	3		1		2					
OTHER CHILDREN: 0 - 5 YRS.										
none	17	38.6	9	56.3	3	30.0	3	27.3	2	28.6
one	23	52.3	5	31.3	5	50.0	8	72.7	5	71.4
two	1	2.3	1	6.3						
three	2	4.5	1	6.3	1	10.0				
four	1	2.3			1	10.0				
OTHER CHILDREN: 6 - 12 YRS.										
none	27	61.4	8	50.0	7	70.0	7	63.6		
one	14	31.8	6	37.5	3	30.0	3	27.3	5	71.4
two	2	4.5	2	12.5					2	28.6
three	1	2.3					1	9.1		
OTHER CHILDREN: 13 - 20 YRS.										
none	40	90.9	14	87.5	8	80.0	11	100	7	100
one	1	2.3			1	10.0				
two	3	6.8	2	12.5	1	10.0				

APPENDIX C - 4 SUMMARY OF SELECTED PARENT DEMOGRAPHIC CHARACTERISTICS

	TOTAL SAMPLE		LOCATION 6		LOCATION 7		LOCATION 8		LOCATION 9	
	freq.	valid %	freq.	valid %	freq.	valid %	freq.	valid %	freq.	valid %
INVOLVEMENT IN PROGRAM	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
none	16	36.4	8	50.0	3	30.0	4	36.4	1	14.3
centre	12	27.3	3	18.8	2	20.0	3	27.3	4	57.1
special service	2	4.5			1	10.0	1	9.1		
home/outreach	5	11.4	1	6.3	2	20.0	1	9.1	1	14.3
rehabilitation	3	6.8			1	10.0	1	9.1	1	14.3
speech/language therapy	1	2.3	1	6.3						
medical/hospital	2	4.5			1	10.0	1	9.1		
rehab/centre	3	6.8	3	18.8						
PROGRAM HOURS PER DAY										
n/a	16	41.0	6	40.0	4	50.0	5	55.6	1	14.3
one	3	4.5			1	12.5	1	11.1	1	14.3
two	7	10.6	4	26.7	1	12.5	1	11.1	1	14.3
three	9	13.6	4	26.7			2	22.2	3	42.9
four	1	1.5			1	12.5				
five plus	3	4.5	1	6.3	1	12.5			1	14.3
missing data	5		1		2		2			
PROGRAM DAYS PER WEEK										
n/a	19	43.2	9	56.3	4	40.0	5	45.5	1	14.3
one	8	18.2	1	6.3	2	20.0	3	27.3	2	28.6
two										
three	1	2.3	1	6.3						
four	4	9.1	3	18.8			1	9.1		
five	12	27.3	2	12.5	4	40.0	2	18.2	4	57.1
PARENT HOURS PER DAY										
none	27	61.4	9	56.3	6	60.0	8	72.7	4	57.1
one	3	6.8	2	12.5	1	10.0				
two	1	2.3	1	6.3						
three	1	2.3					1	9.1		
on-going	12	27.3	4	25.0	3	30.0	2	18.2	3	42.9
PARENT DAYS PER WEEK										
n/a	27	65.9	9	60.0	6	66.7	8	80.0	4	57.1
five plus	14	34.1	6	40.0	3	33.3	2	20.0	3	42.9
missing data	3		1		1		1			

APPENDIX C - 5

SUMMARY OF CHILD DEMOGRAPHIC CHARACTERISTICS

	TOTAL SAMPLE		LOCATION 6		LOCATION 7		LOCATION 8		LOCATION 9	
	freq.	valid %	freq.	valid %	frequency	valid	freq.	valid %	freq.	valid %
DIAGNOSTIC CATEGORIES	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
not provided	5	11.4	5	31.3	0	0.0	0	0.0	0	0.0
sensory handicaps	2	4.5	2	12.5	0	0.0	0	0.0	0	0.0
communication disorders	11	25.0	2	12.5	3	30.0	4	36.4	2	28.6
behavior disorders	0	0.0								
physical h/c & impaired health	12	27.3	2	12.5	4	40.0	3	27.3	3	42.9
developmental disabilities	14	31.8	5	31.3	3	30.0	4	36.4	2	28.6
DIAGNOSTIC PROCEDURES										
parent report	3	6.8	3	18.8						
clinical judgement/screening	6	13.6	2	12.5	4	40.0				
formal assessment	2	4.5					2	18.2		
formal diagnosis	13	29.5	4	25.0	4	40.0	3	27.3	2	28.6
assessment & diagnosis	20	45.5	7	43.8	2	20.0	6	54.5	5	71.4
FIRST AREA OF NEED										
not provided	1	2.3	1	6.3						
speech/articulation	15	34.1	5	31.3	4	40.0	4	36.4	2	28.6
language/communication	6	13.6	3	18.8			2	18.2	1	14.3
hearing/vision	1	2.3	1	6.3						
developmental delay	6	13.6			3	30.0	2	18.2	1	14.3
cognition	2	4.5	2	12.5						
physical/motor	5	11.4	1	6.3	1	10.0			3	42.9
general health/medical condition	8	18.2	3	18.8	2	20.0	3	27.3		
SECOND AREA OF NEED										
not provided	5	11.4	4	25.0					1	14.3
speech/articulation	1	2.3			1	10.0				
language communication	15	34.1	7	43.8	4	40.0	2	18.2	2	28.6
hearing/vision	1	2.3					1	9.1		
behavior	5	11.4	1	6.3	1	10.0	2	18.2	1	14.3
developmental delay	4	9.1	1	6.3			1	9.1	2	28.6
cognitive	3	6.8					2	18.2	1	14.3
physical/motor	7	15.9	3	18.8	3	30.0	1	9.1		
cognition/behavior	3	6.8			1	10.0	2	18.2		

APPENDIX C - 6

SUMMARY OF CHILD DIAGNOSES

	TOTAL SAMPLE		LOCATION 6		LOCATION 7		LOCATION 8		LOCATION 9	
	freq.	valid %	freq.	valid %	freq.	valid %	freq.	valid %	freq.	valid %
	(n=44)		(n=16)		(n=10)		(n=11)		(n=7)	
Not provided	5	11.4	5	31.3						
Cleft lip/palate	1	2.3			1	10.0				
Physical anomolies	1	2.3			1	10.0				
Heart problems	1	2.3	1	6.3						
Sensory impairment	2	4.5	2	12.5						
Cerebral palsy	3	6.8	1	6.3	1	10.0	1	9.1		
Brain injury	1	2.3							1	14.3
Down's Syndrome	3	6.8	2	12.5					1	14.3
P.D.D.	1	2.3							1	14.3
Multiple medical condition	2	4.5	1	6.3			1	9.1		
Multiple physical handicap	1	2.3			1	10.0				
Speech/language delay/deficit	11	25.0	2	12.5	3	30.0	4	36.4	2	28.6
Developmental delay	4	9.1	1	6.3	1	10.0	2	18.2		
Neurological impairment	1	2.3			1	10.0				
Spinal cord injury/paraplegia	1	2.3							1	14.3
Dysmorphic features	1	2.3							1	14.3
Epilepsy/seizures	1	2.3					1	9.1		
Tuberous Sclerosis	1	2.3					1	9.1		
Towne/Brocke Syndrome	1	2.3					1	9.1		
Hypotonia and developmental delay	1	2.3	1	6.3						
Global developmental delay with Hypotonia and visual impairment	1	2.3			1	10.0				

APPENDIX D

URBAN AND NORMATIVE COMPARISONS

Table D - 1

Urban and normative comparisons on the FSI

	Urban Study			Normative Data			Urban/Normative Differences	
	n	M	SD	n	M	SD	t value	p value
mothers	44	13.53	7.85					
fathers	22	11.81	5.68					
Total	66	12.96	7.20	1,000	11	8	2.13	<.05

Table D - 2

Urban and normative comparisons on the PSI

		Urban Study m=44 f=22 n=66		Normative Data m=534 f=100		Urban/Normative Differences	
Child Domain		M	SD	M	SD	t value	p value
Adaptability	(m)	31.61	6.73	24.50	5.70	6.81	<.001
	(f)	29.14	5.38	22.30	2.70	5.80	<.001
	(T)	30.79	6.38				
Acceptability	(m)	17.05	5.22	12.50	3.60	5.67	<.001
	(f)	16.68	5.50	10.00	1.90	5.62	<.001
	(T)	16.92	5.28				
Demandingness	(m)	24.73	7.14	18.10	4.60	6.06	<.001
	(f)	23.18	5.61	18.40	3.60	3.83	<.001
	(T)	24.21	6.67				
Mood	(m)	11.79	3.93	9.60	2.90	3.62	<.001
	(f)	11.55	4.28	10.20	1.50	1.46	NS
	(T)	11.71	4.02				
Distractibility	(m)	27.75	6.89	24.40	5.00	3.16	<.01
	(f)	26.91	6.56	21.80	3.20	3.56	<.001
	(T)	27.47	6.74				
Reinforcement	(m)	11.09	4.52	9.30	2.90	2.58	<01
	(f)	11.09	4.65	10.20	2.30	0.87	NS
	(T)	11.09	4.53				
Child Domain	(m)	124.02	25.97	98.40	19.20	6.40	<.001
	(f)	118.55	23.98	92.90	11.90	4.88	<.001
	(T)	122.20	25.28				

Note. (m) = mothers; (f) = fathers; (T) = total

Table D - 3

Urban and normative comparisons on the FIRM

		Urban Study m=44 f=22 n=66		Normative Data N=322		Urban/Normative Differences	
Subscale		M	SD	M	SD	t value	p value
Esteem & Communication	(m)	32.30	7.35				
	(f)	32.14	5.54				
	(T)	32.24	6.76	35.0	6.00	-3.08	<.01
Mastery & Health	(m)	32.36	11.31				
	(f)	34.45	10.68				
	(T)	33.06	11.07	39.0	9.00	-4.09	<.001
Financial Well-being	(m)	26.23	9.87				
	(f)	29.50	7.90				
	(T)	27.32	9.33	29.0	9.00	-1.34	NS
Extended Family Support	(m)	7.73	3.53				
	(f)	7.23	2.37				
	(T)	7.56	3.18	9.0	2.00	-3.54	<.001
Social Desirability	(m)	11.64	3.63				
	(f)	10.64	2.79				
	(T)	11.30	3.38	12.0	1.00	-1.67	NS
FIRM Total	(m)	98.61	24.66				
	(f)	103.32	18.94				
	(T)	100.18	22.87	110.0	18.00	-3.28	<.01

Note. (m) = mothers; (f) = fathers; (T) = total

Table D - 4

Urban and normative comparisons on the LOT

Scale		Urban Study m=43 f=21 n=64 M	SD	Normative Data n=624 M	SD	Urban/Normative Differences t value	p value
LOT	(m)	17.60	6.89	21.41	5.22	-3.66	<.01
	(f)	20.19	4.62	21.03	4.56	0.82	NS
	(T)	18.45	6.32				

Table D - 5

Urban and normative comparisons on the FCOPES

Scale		Urban Study m=43 f=22 n=65 M	SD	Normative Data n=2740 M	SD	Urban/Normative Differences t value	p value
FCOPES Reframing	(m)	29.58	6.23	30.42	4.86	-0.88	NS
	(f)	29.86	4.06	30.42	4.91	0.64	NS
	(T)	29.68	5.56				
Passive Appraisal	(m)	14.60	3.72	8.20	3.06	11.22	<.001
	(f)	15.45	3.11	8.50	2.95	10.44	<.001
	(T)	14.89	3.52				

Note. (m) = mothers; (f) = fathers; (T) = total

Table D - 6

Urban and normative comparisons on the CHIP

Subscale		Urban Study m=44 f-22 n=66 M	SD	Normative Data n = 308 M	SD	Urban/Normative Differences t value	p value
1. Integration, cooperation & optimism	(m)	36.98	9.22	40.00	15.00	-1.85	NS
	(f)	38.14	6.94	36.00	20.00	1.15	NS
	(T)	37.36	8.49				
2. Support, esteem, & stability	(m)	29.48	9.48	28.00	12.00	0.93	NS
	(f)	27.36	6.92	25.00	15.00	1.38	NS
	(T)	28.77	8.72				
3. Medical communication & consultation	(m)	15.27	4.30	15.00	7.00	0.35	NS
	(f)	13.50	4.22	12.00	8.00	1.59	NS
	(T)	14.68	4.33				

Note. (m) = mothers; (f) = fathers; (T) = total

Table D - 7

Urban and normative comparisons on the FAM III

Subscale		Urban Study m=44 f=22 n=66 M	Urban Study m=44 f=22 n=66 SD	Normative Data n = 372 M	Normative Data n = 372 SD	Urban/normative Differences t value	Urban/normative Differences p value
Task Accomplishment	(m)	54.14	13.63				
	(f)	54.59	10.51				
	(T)	54.29	12.60	50	10	2.62	<.01
Role Performance	(m)	58.02	12.98				
	(f)	52.09	10.28				
	(T)	56.05	12.39	50	10	3.76	<.001
Communication	(m)	52.86	10.31				
	(f)	54.14	10.15				
	(T)	53.29	10.20	50	10	2.42	<.05
Affective Expression	(m)	53.55	12.01				
	(f)	53.91	7.66				
	(T)	53.67	10.70	50	10	2.59	<.01
Affective Involvement	(m)	51.54	12.17				
	(f)	54.18	8.42				
	(T)	52.42	11.07	50	10	1.66	NS
Control	(m)	53.64	11.13				
	(f)	55.09	9.47				
	(T)	54.12	10.56	50	10	2.94	<.01
Values & norms	(m)	50.89	11.48				
	(f)	51.73	9.42				
	(T)	51.17	10.77	50	10	0.82	NS
Social Desirability	(m)	47.18	9.41				
	(f)	46.36	6.54				
	(T)	46.91	8.52	50	10	-2.64	<.01
Defensiveness	(m)	43.45	10.63				
	(f)	47.36	8.27				
	(T)	44.76	10.02	50	10	3.92	<.001
FAM III Total	(m)	53.52	9.52				
	(f)	53.67	7.85				
	(T)	53.57	8.94	50	10	2.93	<.01

APPENDIX E

MOTHER AND FATHER COMPARISONS

Table E - 1

Mother and father comparisons on the FSI

	Urban Study m=44 f=22 n=66			Mother/ Father Differences	
	Range	M	SD	t value	p value
mothers	0 - 32	13.53	7.85		
fathers	0 - 21	11.81	5.68	-1.02	0.314
Total	0 - 32	12.96	7.20		

Table E - 2

Mother and father comparisons on the PSI

		Urban Study m=44 f=22 n=66			Mother/Father Differences	
Sub domain		Range	M	SD	t value	p value
Adaptability	(m)	20 - 45	31.61	6.73		
	(f)	19 - 38	29.14	5.38	-1.62	0.112
	(T)	19 - 45	30.79	6.38		
Acceptability	(m)	7 - 30	17.05	5.22		
	(f)	8 - 27	16.68	5.5	-0.26	0.798
	(T)	7 - 30	16.92	5.28		
Demandingness	(m)	10 - 43	24.73	7.14		
	(f)	14 - 35	23.18	5.61	-0.96	0.341
	(T)	10 - 43	24.21	6.67		
Mood	(m)	5 - 20	11.79	3.93		
	(f)	5 - 20	11.55	4.28	- 0.23	0.820
	(T)	5 - 20	11.71	4.02		
Distractability	(m)	17 - 44	27.75	6.89		
	(f)	11 - 42	26.91	6.56	-0.48	0.632
	(T)	11 - 44	27.47	6.74		
Reinforcement	(m)	6 - 22	11.09	4.52		
	(f)	6 - 27	11.09	4.65	0.00	1.00
	(T)	6 - 27	11.09	4.53		
Child Domain	(m)	79 - 180	124.02	25.97		
	(f)	74 - 163	118.55	23.98	0.85	0.400
	(T)	74 - 180	122.20	25.28		

Note. (m) = mothers; (f) = fathers; (T) = total

Table E - 3

Mother and father comparisons on the FIRM

Subscale		Urban Study m=44 f=22 n=66 Range	M	SD	Mother/Father Differences t value	p value
Esteem & Communication	(m)	17 - 44	32.30	7.35		
	(f)	16 - 40	32.14	5.54	-0.10	0.922
	(T)	16 - 44	32.24	6.76		
Mastery & Health	(m)	7 - 48	32.36	11.31		
	(f)	17 - 57	34.45	10.68	0.73	0.466
	(T)	7 - 57	33.06	11.07		
Financial Well-being	(m)	8 - 46	26.23	9.87		
	(f)	17 - 45	29.50	7.90	1.46	0.151
	(T)	8 - 46	27.32	9.33		
Extended Family Support	(m)	0 - 12	7.73	3.53		
	(f)	1 - 11	7.23	2.37	-0.68	0.498
	(T)	0 - 12	7.56	3.18		
Social Desirability	(m)	3 - 19	11.64	3.63		
	(f)	5 - 19	10.64	2.79	-1.24	0.221
	(T)	3 - 19	11.30	3.38		
FIRM Total	(m)	44 - 136	98.61	24.66		
	(f)	64 - 139	103.32	18.94	0.86	0.395
	(T)	44 - 139	100.18	22.87		

Note. (m) = mothers; (f) = fathers; (T) = total

Table E - 4

Mother and father comparisons on the SSI (sources)

Sources of support		Urban Study m=44 f=22 n=66 Range	M	SD	Mother/Father Differences t value	p value
Spouse	(m)	5 - 15	10.91	3.72		
	(f)	6 - 15	12.59	2.59	2.13	0.037
	(T)	5 - 15	11.47	3.46		
Children	(m)	7 - 15	11.98	2.27		
	(f)	8 - 15	11.91	2.14	-0.12	0.905
	(T)	7 - 15	11.95	2.20		
Relatives	(m)	5 - 15	10.25	2.77		
	(f)	6 - 15	10.45	2.50	0.30	0.764
	(T)	5 - 15	10.31	2.66		
Friends	(m)	5 - 15	10.50	2.55		
	(f)	5 - 15	10.00	2.78	-0.71	0.483
	(T)	5 - 15	10.33	2.62		
Co-workers	(m)	4 - 12	6.21	2.04		
	(f)	5 - 15	9.27	2.10	5.65	0.000
	(T)	4 - 15	7.23	2.51		
Church or	(m)	5 - 15	7.34	3.10		
Synagogue	(f)	5 - 15	8.32	3.67	1.07	0.291
	(T)	5 -15	7.67	3.31		
Spiritual Beliefs	(m)	4 - 15	9.64	3.82		
	(f)	5 - 15	10.32	3.87	0.68	0.502
	(T)	5 - 15	9.86	3.82		
Community	(m)	5 - 13	7.02	2.44		
Groups	(f)	5 - 11	6.77	2.02	-0.44	0.661
	(T)	5 - 13	6.94	2.29		
Professionals	(m)	5 - 15	9.30	2.83		
	(f)	5 - 10	8.00	2.12	-2.06	0.045
	(T)	5 - 15	8.88	2.68		
Special Groups	(m)	5 - 15	7.25	3.06		
	(f)	5 - 14	8.45	3.28	1.44	0.158
	(T)	5 - 15	7.65	3.16		
TV/Books	(m)	5 - 14	7.93	2.48		
	(f)	5 - 13	7.90	2.56	0.03	0.973
	(T)	5 - 14	7.92	2.49		
Other	(m)	4 - 14	5.32	1.55		
	(f)	5 - 9	5.55	1.41	0.60	0.553
	(T)	4 - 14	5.39	1.50		
Total	(m)	66 - 153	103.64	19.40		
	(f)	78 - 152	109.67	20.11	1.14	0.260
	(T)	66 - 153	105.58	19.68		

Note. (m) = mothers (f) = fathers; (T) = total

Table E - 5

Mother and father comparisons on the SSI (types)

		Urban Study m=44 f=22 n=66			Mother/ Father Differences	
Types of support		Range	M	SD	t value	p value
Emotional	(m)	13 - 31	21.07	4.21		
	(f)	15 - 28	21.77	4.06	0.66	0.515
	(T)	13 - 31	21.30	4.14		
Esteem	(m)	13 - 32	20.52	4.17		
	(f)	14 - 32	21.91	4.41	1.23	0.227
	(T)	13 - 32	20.98	4.27		
Network	(m)	12 - 31	20.32	4.19		
	(f)	16 - 31	21.73	4.01	1.32	0.192
	(T)	12 - 31	20.79	4.16		
Appraisal	(m)	12 - 31	19.41	4.05		
	(f)	15 - 30	20.14	4.18	0.67	0.504
	(T)	12 - 31	19.65	4.07		
Altruistic	(m)	16 - 31	22.32	4.30		
	(f)	16 - 31	23.64	4.50	1.14	0.262
	(T)	16 - 31	22.76	4.39		

Note. (m) = mothers (f) = fathers; (T) = total

Table E - 6

Mother and father comparisons on the LOT

Scale		Urban Study m=43 f=21 n=64 Range	M	SD	Mother/Father Differences t value	p value
LOT	(m)	1 - 28	17.60	6.89		
	(f)	13 - 28	20.19	4.62	1.78	0.081
	(T)	1 - 28	18.45	6.32		

Table E - 7

Mother and father comparisons on the FCOPES

Scale		Urban Study m=43 f=22 n=65 Range	M	SD	Mother/Father Differences t value	p value
FCOPES						
Reframing	(m)	10 - 38	29.58	6.23		
	(f)	21 - 36	29.86	4.06	0.22	0.827
	(T)	10 - 38	29.68	5.56		
Passive Appraisals	(m)	7 - 20	14.60	3.72		
	(f)	9 - 20	15.45	3.11	0.97	0.335
	(T)	7 - 20	14.89	3.52		

Note. (m) = mothers; (f) = fathers; (T) = total

Table E - 8

Mother and father comparisons on the CHIP

Subscale		Urban Study m=44 f=22 n=66 Range	M	SD	Mother/Father Differences t value	p value
1. Integration, cooperation, & optimism	(m)	18 - 56	36.98	9.22		
	(f)	24 - 50	38.14	6.94	0.57	0.571
	(T)	18 - 56	37.36	8.49		
2. Support, esteem, & stability	(m)	9 - 53	29.48	9.48		
	(f)	8 - 40	27.36	6.92	-1.03	0.308
	(T)	8 - 53	28.77	8.72		
3. Medical communication & consultation	(m)	8 - 24	15.27	4.30		
	(f)	5 - 21	13.50	4.22	-1.60	0.117
	(T)	5 - 24	14.68	4.33		

Note. (m) = mothers; (f) = fathers; (T) = total

Table E - 9

Mother and father comparisons on the FAM III

Subscale		Urban Study m=44 f=22 n=66 Range	M	SD	Mother/Father Differences t value	p value
Task Accomplishment	(m)	23 - 93	54.14	13.63		
	(f)	28 - 78	54.59	10.51	0.15	0.882
	(T)	23 - 93	54.29	12.60		
Role Performance	(m)	28 - 88	58.02	12.98		
	(f)	33 - 70	52.09	10.28	-2.02	0.049
	(T)	28 - 88	56.05	12.39		
Communication	(m)	31 - 83	52.86	10.31		
	(f)	35 - 73	54.14	10.15	0.48	0.635
	(T)	31 - 83	53.29	10.20		
Affective Expression	(m)	26 - 91	53.55	12.01		
	(f)	44 - 68	53.91	7.66	0.15	0.882
	(T)	26 - 91	53.67	10.70		
Affective Involvement	(m)	34 - 79	51.55	12.17		
	(f)	34 - 67	54.18	8.42	1.03	0.309
	(T)	34 - 79	52.42	11.07		
Control	(m)	31 - 82	53.64	11.13		
	(f)	31 - 76	55.09	9.47	0.55	0.582
	(T)	31 - 82	54.12	10.56		
Values & norms	(m)	29 - 86	50.89	11.48		
	(f)	29 - 69	51.73	9.42	0.32	0.752
	(T)	29 - 86	51.17	10.77		
Social Desirability	(m)	28 - 68	47.18	9.41		
	(f)	33 - 60	46.36	6.54	-0.41	0.682
	(T)	28 - 68	46.91	8.52		
Defensiveness	(m)	16 - 69	43.45	10.63		
	(f)	35 - 73	47.36	8.27	1.64	0.107
	(T)	16 - 73	44.76	10.02		
FAM III Total	(m)	38 - 85	53.52	9.52		
	(f)	38 - 67	53.68	7.85	0.07	0.944
	(T)	38 - 85	53.57	8.94		

APPENDIX F

COUPLES' COMPARISONS

Table F - 1

Couples' comparisons on the FSI

	Urban Study			Couples' Differences	
	n	M	SD	t value	p value
mothers	22	13.61	7.34	-0.91	0.370
fathers	22	11.81	5.68		

Table F - 2

Couples' comparisons on the PSI

		Urban Study m=22 f=22 n=44		Couples' Differences	
Child Domain		M	SD	t value	p value
Adaptability					
	(m)	30.55	6.77		
	(f)	29.14	5.38	-0.76	0.449
Acceptability					
	(m)	18.59	4.76		
	(f)	16.68	5.50	-1.23	0.225
Demandingness					
	(m)	25.50	6.69		
	(f)	23.18	5.61	-1.25	0.220
Mood					
	(m)	11.73	3.82		
	(f)	11.55	4.28	-0.15	0.883
Distractibility					
	(m)	26.59	6.86		
	(f)	26.91	6.56	0.16	0.876
Reinforcement					
	(m)	11.55	4.67		
	(f)	11.09	4.65	-0.32	0.748
Child Domain					
	(m)	124.50	24.33		
	(f)	118.55	23.98	-0.82	0.418

Note. (m) = mothers; (f) = fathers

Table F - 3

Couples' comparisons on the FIRM

		Urban Study m=22 f=22 n=44		Couples' Differences	
Subscale		M	SD	t value	p value
Esteem & Communication	(m)	33.36	7.80		
	(f)	32.14	5.54	-0.60	0.551
Mastery & Health	(m)	34.32	12.34		
	(f)	34.45	10.68	0.04	0.969
Financial Well-being	(m)	28.95	9.95		
	(f)	29.50	7.90	0.20	0.841
Extended Family Support	(m)	8.45	2.86		
	(f)	7.23	2.37	-1.55	0.129
Social Desirability	(m)	11.32	4.01		
	(f)	10.64	2.79	-0.66	0.516
FIRM Total	(m)	105.09	24.15		
	(f)	103.32	18.94	-0.27	0.788

Note. (m) = mothers; (f) = fathers

Table F - 4

Couples' comparisons on the SSI (sources)

Sources of support		Urban Study m=22 f=22 n=44 M	SD	Couples' Differences t value	p value
Spouse	(m)	12.27	3.00		
	(f)	12.59	2.59	0.38	0.708
Children	(m)	12.05	2.08		
	(f)	11.91	2.14	-0.21	0.831
Relatives	(m)	11.14	2.93		
	(f)	10.45	2.50	-0.83	0.412
Friends	(m)	10.91	2.93		
	(f)	10.00	2.78	-1.06	0.297
Co-workers	(m)	6.64	2.44		
	(f)	9.27	2.10	3.84	0.000
Church or	(m)	8.77	3.48		
Synagogue	(f)	8.32	3.67	-0.42	0.675
Spiritual Beliefs	(m)	10.18	4.01		
	(f)	10.32	3.87	0.11	0.909
Community Groups	(m)	7.45	2.60		
	(f)	6.77	2.02	-0.97	0.337
Professionals	(m)	9.50	2.22		
	(f)	8.00	2.12	-2.27	0.029
Special Groups	(m)	7.91	3.05		
	(f)	8.45	3.28	0.57	0.571
TV/Books	(m)	8.27	2.45		
	(f)	7.91	2.56	-0.48	0.633
Other	(m)	5.41	1.94		
	(f)	5.55	1.41	0.27	0.791
Total	(m)	110.50	22.35		
	(f)	109.67	20.11	-0.13	0.898

Note. (m) = mothers (f) = fathers

Table F - 5

Couples' comparisons on the SSI (types)

Types of support		Urban Study m=22 f=22 n=44 M	SD	Couples' Differences t value	p value
Emotional	(m)	22.41	4.87		
	(f)	21.77	4.06	-0.47	0.640
Esteem	(m)	21.82	4.78		
	(f)	21.91	4.41	0.07	0.948
Network	(m)	21.95	4.50		
	(f)	21.73	4.01	-0.18	0.861
Appraisal	(m)	20.41	4.79		
	(f)	20.14	4.18	-0.20	0.841
Altruistic	(m)	23.91	4.98		
	(f)	23.64	4.50	-0.19	0.850

Note. (m) = mothers; (f) = fathers

Table F - 6

Couples' comparisons on the LOT

		Urban Study m=22 f=22 n=44		Couples' Differences	
Scale		M	SD	t value	p value
LOT	(m)	18.43	5.64		
	(f)	20.19	4.62	1.11	0.275

Table F - 7

Couples' comparisons on the FCOPES

		Urban Study N=44 m=22 f=22		Couples' Differences	
Scale		M	SD	t value	p value
FCOPES					
Reframing	(m)	29.14	5.40		
	(f)	29.86	4.06	0.49	0.625
Passive Appraisals	(m)	15.33	3.41		
	(f)	15.45	3.11	0.12	0.904

Note. (m) = mothers; (f) = fathers

Table F - 8

Couples' comparisons on the CHIP

Subscale		Urban Study m=22 f=22 n=44 M	SD	Couples' Differences t value	p value
1. Integration, cooperation, & optimism	(m)	38.95	8.94		
	(f)	38.14	6.94	-0.34	0.736
2. Support, , esteem & stability	(m)	30.95	9.28		
	(f)	27.36	6.91	-1.45	0.154
3. Medical communication & consultation	(m)	15.64	4.59		
	(f)	13.50	4.22	-1.61	0.116

Note. (m) = mothers (f) = fathers

Table F - 9 Couples' comparisons on the FAM III

Subscale		Urban Study m=22 f=22 n=44 M	SD	Couples' Differences t value	p value
Task Accomplishment	(m)	54.13	13.80		
	(f)	54.59	10.51	0.12	0.903
Role Performance	(m)	54.50	14.04		
	(f)	52.09	10.28	-0.56	0.577
Communication	(m)	52.64	10.76		
	(f)	54.14	10.15	0.48	0.637
Affective Expression	(m)	51.95	12.79		
	(f)	53.91	7.66	0.61	0.543
Affective Involvement	(m)	51.32	13.15		
	(f)	54.18	8.42	0.86	0.395
Control	(m)	51.73	11.18		
	(f)	55.09	9.47	1.08	0.288
Values & norms	(m)	50.23	12.09		
	(f)	51.73	9.42	0.46	0.649
Social Desirability	(m)	47.32	9.81		
	(f)	46.36	6.54	-0.38	0.706
Defensiveness	(m)	42.23	9.71		
	(f)	47.36	8.27	1.89	0.066
FAM III Total	(m)	52.36	10.97		
	(f)	53.68	7.85	0.46	0.649

APPENDIX G

MARRIED MOTHER AND SINGLE MOTHER COMPARISONS

Table G - 1

Married mother and single mother comparisons on the FSI

	Urban Study m=31 s=13 n=44		Married mothers/ Single mothers Differences	
	M	S.D.	t value	p value
married mothers	13.39	7.32		
			-0.17	0.865
single mothers	13.88	9.30		
total mothers	13.53	7.85		

Note. (m) = married mothers; (s) = single mothers

Table G - 2

Single mother and married mother comparisons on the PSI

		Urban Study m=31 s=13 n=44		Married mothers/ Single mothers Differences	
Sub domain		Mean	SD	t value	p value
Adaptability	(m)	30.23	6.99		
	(s)	34.92	4.80	-2.56	0.014
	(T)	31.61	6.73		
Acceptability	(m)	17.77	4.89		
	(s)	15.31	5.77	1.35	0.192
	(T)	17.05	5.22		
Demandingness	(m)	24.42	6.96		
	(s)	25.46	7.80	-0.42	0.681
	(T)	24.73	7.14		
Mood	(m)	11.52	4.23		
	(s)	12.46	3.15	-0.82	0.421
	(T)	11.79	3.93		
Distractibility	(m)	26.81	6.71		
	(s)	30.00	7.04	-1.39	0.178
	(T)	27.75	6.89		
Reinforcement	(m)	10.94	4.70		
	(s)	11.46	4.22	-0.36	0.718
	(T)	11.09	4.65		
Child Domain	(m)	121.68	26.47		
	(s)	129.62	24.84	-0.95	0.352
	(T)	124.02	25.97		

Note. (m) = married mothers; (s) = single mothers; (T) = total mothers

Table G - 3

Married mother and single mother comparisons on the FIRM

		Urban Study m=31 s=13 n=44		Married mothers/ Single mothers Differences	
Subscale		M	SD	t value	p value
Esteem & Communication	(m)	33.29	7.02		
	(s)	29.92	7.86	1.34	0.196
	(T)	32.30	7.35		
Mastery & Health	(m)	34.42	10.83		
	(s)	27.46	11.32	1.88	0.073
	(T)	32.36	11.31		
Financial Well-being	(m)	29.52	8.90		
	(s)	18.38	7.49	4.25	0.000
	(T)	26.23	9.87		
Extended Family Support	(m)	8.84	2.85		
	(s)	5.08	3.69	3.29	0.004
	(T)	7.73	3.53		
Social Desirability	(m)	11.55	4.07		
	(s)	11.85	2.38	-0.30	0.76
	(T)	11.64	3.63		
FIRM Total	(m)	106.06	21.39		
	(s)	80.85	23.44	3.34	0.003
	(T)	98.61	24.66		

Note. (m) = married mothers; (s) = single mothers; (T) = total mothers

Table G - 4

Married mother and single mother comparisons on the SSI (sources)

		Urban Study m=31 s=13 n=44		Married mother/ Single mother Differences	
Sources of support		M	SD	t value	p value
Spouse	(m)	12.16	2.79		
	(s)	7.92	4.05	3.44	0.003
	(T)	10.91	3.72		
Children	(m)	11.74	2.14		
	(s)	12.54	2.54	-0.99	0.333
	(T)	11.98	2.27		
Relatives	(m)	10.74	2.68		
	(s)	9.08	2.69	1.87	0.074
	(T)	10.25	2.77		
Friends	(m)	10.45	2.65		
	(s)	10.62	2.36	-0.20	0.842
	(T)	10.50	2.55		
Co-workers	(m)	6.55	2.28		
	(s)	5.38	0.96	2.38	0.022
	(T)	6.21	2.04		
Church or	(m)	8.13	3.29		
Synagogue	(s)	5.46	1.39	3.78	0.000
	(T)	7.34	3.10		
Spiritual Beliefs	(m)	10.00	3.87		
	(s)	8.77	3.68	1.00	0.329
	(T)	9.64	3.82		
Community Groups	(m)	6.97	2.46		
	(s)	7.15	2.48	-0.23	0.822
	(T)	7.02	2.44		
Professionals	(m)	8.94	2.39		
	(s)	10.15	3.65	-1.11	0.284
	(T)	9.30	2.83		
Special Groups	(m)	7.13	2.85		
	(s)	7.54	3.62	-0.36	0.720
	(T)	7.25	3.06		
TV/Books	(m)	8.16	2.61		
	(s)	7.38	2.14	1.03	0.314
	(T)	7.93	2.48		
Other	(m)	5.29	1.64		
	(s)	5.38	1.38	-0.19	0.847
	(T)	5.32	1.55		
Total	(m)	106.26	20.64		
	(s)	97.38	14.96	1.59	0.121
	(T)	103.64	10.40		

Note. (m) = mothers; (f) = fathers; (T) = total

Table G - 5

Single mother and married mother comparisons on the SSI (types)

Types of support		Urban Study m=31 s=13 n=44 M	SD	Married mothers/ Single mothers Differences t value	p value
Emotional	(m)	21.65	4.46		
	(s)	19.69	3.28	1.61	0.117
	(T)	21.07	4.21		
Esteem	(m)	20.94	4.38		
	(s)	19.54	3.60	1.10	0.281
	(T)	20.52	4.17		
Network	(m)	20.94	4.33		
	(s)	18.85	3.58	1.66	0.109
	(T)	20.32	4.19		
Appraisal	(m)	19.81	4.28		
	(s)	18.46	3.41	1.10	0.279
	(T)	19.41	4.05		
Altruistic	(m)	22.94	4.64		
	(s)	20.85	3.02	1.77	0.086
	(T)	22.32	4.30		

Note. (m) = married mothers; (s) = single mothers; (T) = total mothers

Table G - 6

Married mother and single mother comparisons on the LOT

		Urban Study m=30 s=13 n=44		Married mothers/ Single mothers Differences	
Scale		M	SD	t value	p value
LOT	(m)	18.47	6.00		
	(s)	15.62	8.53	1.09	0.289
	(T)	17.60	6.89		

Table G - 7

Married mother and single mother comparisons on the FCOPES

		Urban Study m=30 s=13 n=44		Married mothers/ Single mothers Differences	
Scale		M	SD	t value	p value
FCOPES					
Reframing	(m)	30.17	5.19		
	(s)	28.23	8.25	0.78	0.446
	(T)	29.58	6.23		
Passive Appraisal	(m)	15.07	3.73		
	(s)	13.54	3.60	1.27	0.218
	(T)	14.60	3.72		

Note. (m) = married mothers; (s) = single mothers; (T) = total mothers

Table G - 8

Married mother and single mother comparisons on the CHIP

Subscale		Urban Study m=31 s=13 n=44 M	SD	Married mothers/ Single mothers Differences t value	p value
1. Integration, cooperation, & optimism	(m)	38.61	8.37		
	(s)	33.08	10.30	1.72	0.103
	(T)	36.98	9.22		
2. Support, esteem, & stability	(m)	29.94	9.37		
	(s)	28.38	10.05	0.48	0.639
	(T)	29.48	9.48		
3. Medical communication & consultation	(m)	15.45	4.50		
	(s)	14.85	3.96	0.44	0.660
	(T)	15.27	4.30		

Note. (m) = married mothers; (s) = single mothers; (T) = total mothers

Table G - 9

Married mother and single mother comparisons on the FAM III

		Urban Study m=31 s=13 n=44		Married mothers/ Single mothers Differences	
Subscale		M	SD	t value	p value
Task Accomplishment	(m)	52.35	13.09		
	(s)	58.38	14.50	-1.29	0.210
	(T)	54.14	13.63		
Role Performance	(m)	56.26	13.06		
	(s)	62.23	12.25	-1.45	0.161
	(T)	58.02	12.98		
Communication	(m)	52.23	11.12		
	(s)	54.38	8.23	-0.71	0.482
	(T)	52.86	10.31		
Affective Expression	(m)	53.03	11.71		
	(s)	54.77	13.10	-0.41	0.683
	(T)	53.55	12.01		
Affective Involvement	(m)	51.65	12.53		
	(s)	51.31	11.77	0.09	0.933
	(T)	51.55	12.17		
Control	(m)	51.68	11.10		
	(s)	58.31	10.13	-1.92	0.066
	(T)	53.64	11.13		
Values & norms	(m)	50.87	12.32		
	(s)	50.92	9.60	-0.02	0.988
	(T)	50.89	11.48		
Social Desirability	(m)	48.06	10.10		
	(s)	45.08	7.44	1.09	0.286
	(T)	47.18	9.41		
Defensiveness	(m)	43.35	10.15		
	(s)	43.69	12.14	-0.09	0.931
	(T)	43.45	10.63		
FAM III Total	(m)	52.58	10.13		
	(s)	55.76	7.80	-1.12	0.270
	(T)	53.52	9.52		

Note. (m) = married mothers; (s) = single mothers; (T) = total mothers

APPENDIX H

URBAN AND RURAL COMPARISONS

Table H - 1

Urban and rural comparisons on the FSI

	Urban Study m=44 f=22 n=66		Rural Study m=44 f=27 n=71		Urban/Rural Differences	
	M	SD	M	SD	t value	p value
mothers	13.53	7.85	12.60	8.48	-0.53	0.595
fathers	11.81	5.68	12.09	9.22	0.13	0.897
Total	12.96	7.20	12.41	8.71	-0.40	0.686

Table H - 2 Urban and rural comparisons on the PSI

Child Domain		Urban Study m=44 f=22 n=66 M	Urban Study m=44 f=22 n=66 SD	Rural Study m=44 f=27 n=71 M	Rural Study m=44 f=27 n=71 SD	Urban/Rural Differences t value	Urban/Rural Differences p value
Adaptability	(m)	31.61	6.73	28.52	7.27	-2.07	0.041
	(f)	29.14	5.38	28.04	7.43	-0.60	0.552
	(T)	30.79	6.38	28.34	7.28	-2.10	0.038
Acceptability	(m)	17.05	5.22	15.39	4.41	-1.61	0.111
	(f)	16.68	5.50	14.89	4.60	-1.22	0.229
	(T)	16.92	5.28	15.20	4.46	-2.06	0.041
Demandingness	(m)	24.73	7.14	22.34	7.18	-1.56	0.121
	(f)	23.18	5.61	21.07	7.03	-1.17	0.249
	(T)	24.21	6.67	21.86	7.10	-2.00	0.047
Mood	(m)	11.79	3.93	11.11	3.62	-0.85	0.400
	(f)	11.55	4.28	10.63	2.88	-0.86	0.397
	(T)	11.71	4.02	10.93	3.34	-1.23	0.220
Distractability	(m)	27.75	6.89	26.52	6.56	-0.86	0.394
	(f)	26.91	6.56	24.89	7.50	-1.01	0.320
	(T)	27.47	6.74	25.90	6.92	-1.34	0.182
Reinforcement	(m)	11.09	4.52	10.05	3.34	-1.23	0.221
	(f)	11.09	4.65	9.30	2.96	-1.57	0.126
	(T)	11.09	4.53	9.76	3.20	-1.97	0.051
Child Domain	(m)	124.02	25.97	113.93	23.18	-1.92	0.058
	(f)	118.55	23.98	108.81	25.66	-1.37	0.178
	(T)	122.20	25.28	111.99	24.10	-2.42	0.014

Note. (m) = mothers; (f) = fathers; (T) = total

Table H - 3

Urban and rural comparisons on the FIRM

Subscale		Urban Study m=44 f=22 n=66 M	Urban Study m=44 f=22 n=66 SD	Rural Study m=44 f=27 n=70 M	Rural Study m=44 f=27 n=70 SD	Urban/Rural Differences t value	Urban/Rural Differences p value
Esteem & Communication	(m)	32.30	7.35	31.77	7.52	-0.33	0.742
	(f)	32.14	5.54	34.42	5.28	1.46	0.153
	(T)	32.24	6.76	32.76	6.85	0.44	0.660
Mastery & Health	(m)	32.36	11.31	36.16	9.21	1.73	0.088
	(f)	34.45	10.68	35.92	10.04	0.49	0.628
	(T)	33.06	11.07	36.07	9.46	1.70	0.091
Financial Well-being	(m)	26.23	9.87	29.11	8.72	1.45	0.150
	(f)	29.50	7.90	31.96	9.06	1.01	0.320
	(T)	27.32	9.33	30.17	8.89	1.82	0.070
Extended Family Support	(m)	7.73	3.53	8.50	2.79	1.14	0.258
	(f)	7.23	2.37	8.11	3.15	1.11	0.272
	(T)	7.56	3.18	8.35	2.91	1.52	0.131
Social Desirability	(m)	11.64	3.63	11.43	3.39	-0.27	0.785
	(f)	10.64	2.79	11.23	3.25	0.68	0.499
	(T)	11.30	3.38	11.36	3.32	0.09	0.925
FIRM Total	(m)	98.61	24.66	105.54	22.19	1.39	0.169
	(f)	103.32	18.94	110.42	22.74	1.18	0.244
	(T)	100.18	22.87	107.36	22.36	1.85	0.067

Note. (m) = mothers; (f) = fathers; (T) = total

Table H - 4 Urban and rural comparisons on the SSI (sources)

Sources of support		Urban Study m=44 f=22 n=66 M	SD	Rural Study m=44 f=27 n=70 M	SD	Urban/Rural Differences t value	p value
Spouse	(m)	10.91	3.72	12.61	2.86	2.41	0.014
	(f)	12.59	2.59	13.46	2.06	1.27	0.211
	(T)	11.47	3.46	12.93	2.61	2.76	0.007
Children	(m)	11.98	2.27	12.68	2.11	1.51	0.135
	(f)	11.91	2.14	13.31	1.91	2.37	0.022
	(T)	11.95	2.20	12.91	2.05	2.62	0.010
Relatives	(m)	10.25	2.77	12.05	2.51	3.19	0.002
	(f)	10.45	2.50	12.31	2.65	2.49	0.017
	(T)	10.31	2.66	12.14	2.54	4.08	0.000
Friends	(m)	10.50	2.55	11.57	2.21	2.10	0.039
	(f)	10.00	2.78	12.08	2.26	2.81	0.008
	(T)	10.33	2.62	11.76	2.23	3.41	0.001
Co-workers	(m)	6.21	2.04	7.25	3.12	1.86	0.067
	(f)	9.27	2.10	10.77	2.39	2.31	0.025
	(T)	7.23	2.51	8.56	3.33	2.64	0.009
Church or	(m)	7.34	3.10	7.39	3.12	0.07	0.946
Synagogue	(f)	8.32	3.67	7.62	3.41	-0.68	0.498
	(T)	7.67	3.31	7.47	3.21	-0.35	0.727
Spiritual Beliefs	(m)	9.64	3.82	8.26	3.53	-1.75	0.083
	(f)	10.32	3.87	8.19	3.37	-2.01	0.050
	(T)	9.86	3.82	8.23	3.45	-2.60	0.010
Community Groups	(m)	7.02	2.44	7.89	2.91	1.49	0.139
	(f)	6.77	2.02	8.31	2.53	2.34	0.024
	(T)	6.94	2.29	8.04	2.76	2.53	0.013
Professionals	(m)	9.30	2.83	9.39	2.64	0.16	0.877
	(f)	8.00	2.12	8.50	2.52	0.74	0.464
	(T)	8.88	2.68	9.06	2.62	0.40	0.693
Special Groups	(m)	7.25	3.06	7.43	2.83	0.29	0.773
	(f)	8.45	3.28	7.35	2.74	-1.26	0.216
	(T)	7.65	3.16	7.40	2.78	-0.49	0.624
TV/Books	(m)	7.93	2.48	7.26	2.61	-1.24	0.219
	(f)	7.90	2.56	7.31	2.80	-0.78	0.441
	(T)	7.92	2.49	7.28	2.67	-1.46	0.146
Other	(m)	5.32	1.55	5.11	0.62	-0.81	0.420
	(f)	5.55	1.41	5.27	0.87	-0.80	0.429
	(T)	5.39	1.50	5.17	0.72	-1.09	0.277
Total	(m)	103.64	19.40	109.02	18.31	1.32	0.189
	(f)	109.67	20.11	114.46	18.08	0.85	0.400
	(T)	105.58	19.68	111.10	18.28	1.67	0.097

Note. (m) = mothers; (f) = fathers; (T) = total

Table H - 5 Urban and rural comparisons on the SSI (types)

Types of support		Urban Study m=44 f=22 n=66 M	SD	Rural Study m=44 f=27 n=66 M	SD	Urban/Rural Differences t value	p value
Emotional	(m)	21.07	4.21	21.91	3.66	1.00	0.320
	(f)	21.77	4.06	22.23	4.14	0.39	0.701
	(T)	21.30	4.14	22.03	3.82	1.06	0.291
Esteem	(m)	20.52	4.17	21.80	3.76	1.50	0.137
	(f)	21.91	4.41	23.58	3.91	1.38	0.176
	(T)	20.98	4.27	22.46	3.89	2.10	0.038
Network	(m)	20.32	4.19	21.80	3.95	1.70	0.093
	(f)	21.73	4.01	22.54	3.65	0.73	0.471
	(T)	20.79	4.16	22.07	3.83	1.87	0.064
Appraisal	(m)	19.41	4.05	20.02	3.53	0.76	0.451
	(f)	20.14	4.18	21.23	4.23	0.90	0.373
	(T)	19.65	4.07	20.47	3.82	1.21	0.229
Altruistic	(m)	22.32	4.30	23.11	4.56	0.84	0.402
	(f)	23.64	4.50	24.88	4.23	0.98	0.330
	(T)	22.76	4.39	23.77	4.49	1.33	0.185

Note. (m) = mothers; (f) = fathers; (T) = total

Table H - 6

Urban and rural comparisons on the LOT

		Urban Study m=43 f=21 n=64		Rural Study m=44 f=26 n=70		Urban/Rural Differences	
Scale		M	SD	M	SD	t value	p value
LOT	(m)	17.60	6.89	18.80	5.27	0.90	0.369
	(f)	20.19	4.62	20.00	5.08	-0.13	0.894
	(T)	18.45	6.32	19.24	5.19	0.79	0.433

Table H - 7

Urban and rural comparisons on the FCOPES

		Urban Study m=43 f=22 n=65		Rural Study m=43 f=27 n=71		Urban/Rural Differences	
Scale		M	SD	M	SD	t value	p value
FCOPES Reframing	(m)	29.58	6.23	30.86	5.05	1.05	0.295
	(f)	29.86	4.06	31.19	4.88	1.03	0.306
	(T)	29.68	5.56	30.98	4.95	1.44	0.151
Passive Appraisals	(m)	14.60	3.72	15.16	3.40	0.73	0.470
	(f)	15.45	3.11	15.41	3.39	-0.05	0.960
	(T)	14.89	3.52	15.25	3.38	0.61	0.543

Note. (m) = mothers; (f) = fathers; (T) = total

Table H - 8

Urban and rural comparisons on the CHIP

Subscale		Urban Study m=44 f=22 n=66 M	Urban Study m=44 f=22 n=66 SD	Rural Study m=44 f=27 n=71 M	Rural Study m=44 f=27 n=71 SD	Urban/Rural Differences t value	Urban/Rural Differences p value
1. Integration	(m)	36.98	9.22	41.45	8.46	2.37	0.020
cooperation,	(f)	38.14	6.94	41.54	6.80	1.68	0.100
& optimism	(T)	37.36	8.49	41.49	7.86	2.91	0.004
2. Support,	(m)	29.48	9.48	31.80	8.94	1.18	0.241
esteem,	(f)	27.36	6.93	33.24	8.70	2.58	0.013
& stability	(T)	28.77	8.72	32.32	8.81	2.35	0.020
3. Medical	(m)	15.27	4.30	16.98	4.04	1.91	0.059
communication	(f)	13.50	4.22	14.12	4.39	0.49	0.624
& consultation	(T)	14.68	4.33	15.94	4.37	1.68	0.094

Note. (m) = mothers; (f) = fathers; (T) = total

Table H - 9

Urban and rural comparisons on the FAM III

Subscale		Urban Study m=44 f=22 n=66 M	Urban Study m=44 f=22 n=66 SD	Rural Study m=44 f=27 n=71 M	Rural Study m=44 f=27 n=71 SD	Urban/Rural Differences t value	Urban/Rural Differences p value
Task Accomplishment	(m)	54.14	13.63	50.05	10.31	-1.59	0.116
	(f)	54.59	10.51	50.22	9.54	-1.51	0.139
	(T)	54.29	12.60	50.11	9.95	-2.14	0.034
Role Performance	(m)	58.02	12.98	52.36	11.40	-2.17	0.033
	(f)	52.09	10.28	49.22	8.17	-1.06	0.294
	(T)	56.05	12.39	51.17	10.34	-2.49	0.024
Communication	(m)	52.86	10.31	51.25	8.51	-0.80	0.425
	(f)	54.14	10.15	54.37	9.24	0.08	0.934
	(T)	53.29	10.20	52.44	8.86	-0.52	0.604
Affective Expression	(m)	53.55	12.01	50.91	10.24	-1.11	0.271
	(f)	53.91	7.66	51.85	9.53	-0.84	0.406
	(T)	53.67	10.70	51.27	9.92	-1.36	0.177
Affective Involvement	(m)	51.55	12.17	51.02	8.97	-0.23	0.819
	(f)	54.18	8.42	50.67	9.12	-1.40	0.168
	(T)	52.42	11.07	50.89	8.96	-0.89	0.376
Control	(m)	53.64	11.13	51.70	10.99	-0.82	0.415
	(f)	55.09	9.47	53.07	10.99	-0.69	0.494
	(T)	54.12	10.56	52.23	10.93	-1.03	0.304
Values & norms	(m)	50.89	11.48	52.32	9.61	0.63	0.528
	(f)	51.73	9.42	50.67	10.51	-0.37	0.712
	(T)	51.17	10.77	51.69	9.92	0.30	0.768
Social Desirability	(m)	47.18	9.41	47.50	9.05	0.16	0.872
	(f)	46.36	6.54	46.04	10.04	-0.14	0.892
	(T)	46.91	8.52	46.94	9.40	0.02	0.982
Defensiveness	(m)	43.45	10.63	44.68	10.55	0.54	0.588
	(f)	47.36	8.27	42.63	10.11	-1.80	0.078
	(T)	44.76	10.02	43.90	10.36	-0.49	0.624
FAM III Total	(m)	53.52	9.52	51.37	7.75	-1.16	0.250
	(f)	53.68	7.85	51.44	7.52	-1.01	0.317
	(T)	53.57	8.94	51.40	7.61	-1.53	0.129